



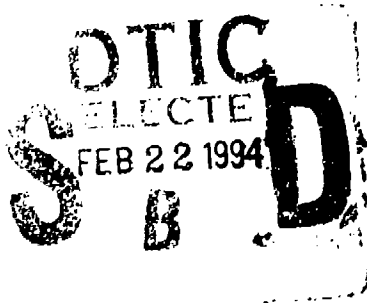
Research Product 94-02

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The Commander's Battle Staff Handbook

An Introduction to Staff Functional Area Duties for New Battalion Staff Officers



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December 1993

**Fort Benning Field Unit
Training Systems Research Division**

U.S. Army Research Institute for the Behavioral and Social Sciences

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13. ABSTRACT (Maximum 200 words) This report describes the development and evaluation of the (battalion) Commander's Battle Staff Handbook. The handbook provides a quick-fix familiarization for each staff functional area. Relevant doctrine and a realistic job preview are incorporated with reference material to allow an officer to get started as a staff member. Checklists are presented to guide the expectations of each staff member and to assist them in determining the information they need from their battalion commander and from each other to accomplish mission planning, preparation, and execution. Draft versions of the handbook were provided to 185 soldiers serving in combat arms, combat service support, and National Guard units and to military planners and observer controllers from the Joint Readiness Training Center and the National Training Center. Survey findings indicate that the handbook was well received by the respondents. Staff members who used the handbook to prepare for combat training center rotation found it to be a useful guide for staff actions in both the field and the garrison. They also felt that the handbook was a valuable tool to inform the individual staff member of his responsibilities and duties. Most important, they (Continued)					
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felt that it helped them do their jobs more effectively. The handbook was perceived by all respondents as an effective aid in enhancing their understanding of the synchronization of duties and responsibilities among the battalion commander and the staff.

The handbook represents a partial but critical solution to a gap that exists between institutional and unit training and in officer preparation for staff assignments. It is an effective tool that supports battalion commanders' staff training programs and enhances unit combat readiness.

Research Product 94-02

**The Commander's Battle Staff Handbook:
An Introduction to Staff Functional Area Duties
for New Battalion Staff Officers**

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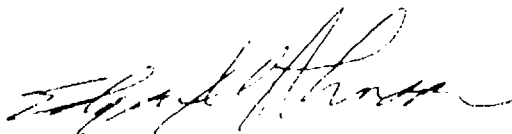
FOREWORD

Currently, systematic staff functional area training is not available to prepare the maneuver branch officer for his assigned staff duties in the battalion. Battalion and brigade staff functional area training were removed from the Programs of Instruction (POI) of the officer advanced course (OAC) in 1974 when the POIs were reduced from 9 to 6 months.

Recent attempts to address this issue have resulted in courses (Tactical Commander's Development Course (TCDC); and the Battle Staff NCO course) aimed at improving and enhancing staff synchronization. These courses do not, however, compensate for the deficiencies in staff functional area training. These deficiencies in individual knowledge among the maneuver battalion's staff officers and other branch officers (S2, Fire Support Officer, Engineer) detract from the collective ability of the staff to synchronize activities.

The development of the *Commander's Battle Staff Handbook* offers an immediate solution to the need for improving staff functional area training. The handbook contains an overview of battalion staff functional areas with a reference list for each position. This provides the new staff officer with sufficient information to learn what staff functional areas are, how they relate to one another, and how to synchronize supporting staff plans for tactical operations. The handbook is comprehensive and small enough to fit in the pocket of the battle dress uniform.

The research leading to this product was sponsored by the U.S. Army Combined Arms Command (Training) and was conducted under a Memorandum of Agreement established between the U.S. Army Research Institute for the Behavioral and Social Sciences and the command in May 1988. Findings resulting in the development of this research product were briefed to the sponsors, the Commanding General, U.S. Army Joint Readiness Training Center and the Deputy Commanding General-Training, U.S. Army Combined Arms Command in December 1991. Briefings followed to the Commanding General, U.S. Army Infantry School in March 1992; to the Deputy Command (TRADOC) in May 1992; to the Assistant Deputy Chief of Staff for Training, TRADOC, in September 1992; and to the U.S. Army Deputy Chiefs of Staff for Personnel and Operations (Training) in December 1992.



EDGAR M. JOHNSON
Director

THE COMMANDER'S BATTLE STAFF HANDBOOK: AN INTRODUCTION TO STAFF FUNCTIONAL AREA DUTIES FOR NEW BATTALION STAFF OFFICERS

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THE COMMANDER'S BATTLE STAFF HANDBOOK:
AN INTRODUCTION TO STAFF FUNCTIONAL AREA DUTIES
FOR NEW BATTALION STAFF OFFICERS

Introduction

Background

The primary function of the battalion commander's staff and subordinate commanders is to assist the commander in the direction and control of the unit's operations (Combined Arms and Services Staff School, 1990a). Each staff member must know his particular functional specialty in detail, as well as how that specialty relates to other staff actions (Thompson, Thompson, Pleban, & Valentine, 1991).

In theory, the individual should be trained to perform assigned staff duties as well as know how those duties are integrated into the rest of the command and staff functions. Such training is critical since it provides the foundation for staffs to effectively synchronize the critical elements of combat power.

Synchronization is one of the five basic tenets of the Airland Battle Doctrine (the remaining tenets include initiative, agility, depth, and versatility). According to FM 100-5, Operations (June 1993):

Synchronization is arranging activities in time and space to mass at the decisive point. It [Synchronization] includes, but is not limited to, the massed effects of combat power at the point of decision. Staffs ... make a large part of the synchronization plan happen ... through the actual planning and coordination of movements, fires, and supporting activities.

The chain of operational doctrine, from Army level (FM 100-5, June 1993) to company team [FM 71-1, Tank and Mechanized Infantry Company Team (November 1988)] has consistently emphasized synchronization as a tenet of the Airland Battle. See also FM 100-15, Corps Operations (September 1989); FM 71-100, Division Operations (June, 1990); FM 71-3, Armored and Mechanized Infantry Brigade (May 1988); FM 7-20, The Infantry Battalion (Infantry, Airborne, and Air Assault) (April 1992). These manuals reflect the emphasis on synchronization of ground maneuver units. The importance of synchronization in combat support and combat service support doctrine is also well documented [FM 5-100, Engineer Combat Operations (November 1988); FM 6-20, Fire Support in the Airland Battle (May 1988);

FM 63-2, Division Support Command, Armored, Infantry, and Mechanized Infantry Divisions (May 1991); FM 100-1.3, Army Airspace Command and Control in a Combat Zone (October 1987)].

In practice, the US Army Command and General Staff College trains officers to serve on division and higher level staffs, initially through the Combined Arms and Services Staff School (CAS³). The primary focus of the CAS³, however, is on the development of such staff skills as writing and briefing and not staff functional area expertise (Army Research Institute [ARI] Newsletter, 1992).

There is, at the present time, no systematic staff functional area training available for the maneuver branch officer to prepare him for his assigned staff duties in the battalion. Battalion and brigade staff functional area training were deleted from the Programs of Instruction (POI) of the officer advanced courses (OAC) in 1974 when the POIs were reduced from nine to six months (Thompson, et al., 1991).

After 1974, courses targeting specific staff functions, such as the S1 and S4, were developed to train officers enroute to troop unit staff assignments. However, the S1 course at the Adjutant General School was recently deleted and the Quartermaster School trains only 60 officers annually to be S4s (ARI Newsletter, 1992).

This is unfortunate since maneuver battalions serve many critical roles on the airland battlefield (FM 7-20, 1992). While the division is the backbone of the US Army's combat capability, the land battle is won or lost by the maneuver battalion (CAS³, 1990b).

The current focus for the Infantry and Armor Advanced Courses (IOAC/AOAC respectively) is on serving as company and troop commanders and as battalion S3s (Operations Officers) or brigade assistant S3s. As presently configured, beyond familiarization for tactical exercises, there is no available time to train battalion personnel administration (S1) or logistics and maintenance (S4) duties.

Recent surveys conducted by Thompson et al. (1991) of AOAC and IOAC officers showed that very few (15.2% and 18.7% respectively) had received any training to prepare them for staff duties. The majority of officers serving in staff positions at the battalion level learned their primary staff duties primarily through OJT and mentoring. However, only 25 percent of the AOAC officers and 33 percent of the IOAC officers with staff experience felt that these methods adequately prepared them to perform their staff duties.

The inadequacy of this limited training is clearly reflected in the comments of observer/controllers (O/Cs) from their observations at the combat training centers (CTCs), questionnaires/interviews with battalion commanders and their staffs, and related CTC findings. Feedback from O/Cs indicated that staff functional areas suffered from a lack of training and coordination (Thompson et al., 1991). Lack of individual training was confirmed by interviews conducted by Thompson et al. (1991) who reported individual staff skill weaknesses for the S1, S2, and S4 positions.

Staff synchronization and coordination problems have been well documented. Crawford and Hensler (1990) reviewed 11 JRTC battalion take home packages and the 11 related O/C training observations. They reported numerous staff synchronization/coordination problems. For example, they found that information flow during planning, preparation, and execution was deficient. Many supporting staff elements especially the Fire Support Officer (FSO) and the engineer, did not integrate their plans with the battalion staff maneuver plan. Similarly, the Air Defense Officer (ADO) was found to be weak in detailed coordination with maneuver staffs and in light force tactics. The combat service support (CSS) area appeared to be in the greatest need of doctrinal, training (coordination and synchronization) and organizational improvements (McDaniel, 1990).

Current Systemic Training Interventions

Several recent training interventions have been developed to address the staff synchronization process. One specific course, the Tactical Commanders' Development Course (TCDC), is designed to train battalion and brigade commanders to synchronize the battlefield operating systems and to apply tactical doctrine in offensive and defensive operations. The focus is on the "how to" of synchronization while planning, preparing and executing missions. A second course, the Battle Staff NCO Course, is designed to teach individual staff section skills and the coordination, or synchronization of staff functions as part of the senior NCO curriculum.

As was mentioned earlier, the TCDC and Battle Staff NCO Courses are directed primarily at improving and enhancing staff synchronization. They do not compensate for the deficiencies in staff functional area training. For the most part, the maneuver battalion's own staff officers lack branch doctrinal knowledge as do other branch officers (S2, Fire Support Officer, Engineer). These deficiencies in individual knowledge detract from the collective ability of the staff to synchronize activities.

Immediate Interventions for Staff Functional Area Training

One immediate response to the need for improving staff functional area training has been to provide individuals with a handbook containing an overview of battalion staff functional areas. The handbook provides a quick-fix familiarization of each staff functional area. Relevant doctrine and a realistic job preview (Premack, & Wanous 1985) are incorporated with reference material to allow an officer to "get started" as a staff member. Checklists are presented in the handbook to guide the expectations of each staff member and to assist them in determining what information they need from their battalion commander and from each other to accomplish mission planning, preparation, and execution.

The handbook is small enough to fit in the pocket of the battle dress uniform, thus, making it readily available to the staff officer. The development of this handbook, entitled 'The Commander's Battle Staff Handbook' is described in the following sections. The complete handbook is presented in the Appendix.

The Commander's Battle Staff Handbook

Organization and Format

The handbook is divided into twelve sections, with each section focusing on a specific staff position. These positions include:

- executive officer (XO)
- command sergeant major (CSM)
- personnel and administration officer (S1)
- intelligence officer (S2/BICC)
- operations officer (S3) and assistant S3 Air
- logistics and battalion motor officer (S4/BMO)
- fire support officer (FSO)
- engineer
- air defense artillery officer (ADA)
- signal officer
- chemical officer
- chaplain

The internal organization of each section is, for the most part, consistent throughout the handbook. Primary topic areas, based in part, on subject matter expert (SME) input include:

- Introduction
- Assets (of the staff/slice position)
- Primary Duties
- Staff Coordination
- Planning (for the operation)

- Preparation (for the operation)
- Execution (in the operation)
- Conclusion
- References

Key points are highlighted (bulletized and boxed) throughout the sections. Following the conclusion for each staff section, a highlighted set of checklists are presented; one for the battalion commander and one for the staff/slice officer.

Content Development

The content of each of the sections is based on a variety of sources such as field manuals (FMs), training circulars (TCs), mission training plans (MTPs), course modules/outlines, department of the Army pamphlets (DA PAM), Army regulations (AR), and SME feedback. A significant number of SMEs included O/Cs from both the Joint Readiness Training Center (JRTC) and the National Training Center (NTC).

Content development was an iterative process. SME feedback played a critical role in refining the content of selected topic areas for the staff sections noted above.

Handbook Utility

Draft versions of the handbook were provided to 185 soldiers serving in combat arms (mechanized infantry, airborne, air assault, ranger, special forces), combat service support (medical, transportation), and National Guard units, military planners, and O/Cs. In addition, each individual received a copy of one of two surveys. With a few exceptions, battalion staff personnel preparing for a CTC rotation received a slightly different survey than those individuals serving as external reviewers. Surveys consisted of multiple choice and short answer items. Following the completion of the rotation/review of the handbook, the soldiers were asked to use the paper-and-pencil instrument to evaluate the handbook on the following criteria:

- The frequency which specific sections of the handbook were used
- The overall usefulness of the handbook for use in the field by section
- The overall usefulness of the handbook for use in garrison by section
- Usefulness of the handbook in aiding the understanding of staff responsibilities and duties by section

- The usefulness of the specific checklists for the command and staff/slice members
- The clarity of writing
- Organization of the sections in a meaningful fashion
- Overall value of the handbook as an aid in understanding the synchronization of duties and responsibilities among the battalion commander and his staff
- Overall value of the handbook as an aid to individual staff members in understanding their own responsibilities and duties
- Enhancement of individual job performance

General Findings

Items assessing the first four criteria described above were designed to yield multiple responses from the respondent, since each section of the handbook (twelve staff positions) was to be rated separately. Thus, for one of these items, an individual could provide no responses (if he failed to review any of the sections) or as many as twelve responses (if he reviewed all twelve sections).

Frequency of use/usefulness of handbook. All sections of the handbook were referred to at least 'once in awhile' (76% of the 46 ratings obtained for this question fell in the categories 'quite often/fairly often/once in a while'). Sections receiving the most ratings included S1, S3/S3 Air, and Engineer.

With regard to usefulness, the majority of the respondents' ratings (89.5% of 57 ratings obtained for this question) indicated that they felt the section content of the handbook was 'extremely/very/ or fairly useful' for use in the field. Eighty-eight percent (88.7%) of the 62 ratings obtained from the respondents indicated that the section content was 'extremely/very/ or fairly useful' for use in garrison. Sections receiving the most ratings included S3/S3 Air and S4 for field and S1 and S3/S3 Air for garrison.

Ninety-one percent of the respondents' ratings (91.1% of the 271 ratings obtained for this question) showed that they felt the handbook would be 'extremely/very/ or fairly useful' in enhancing an individual's understanding of the responsibilities and duties of the staff positions described in the specific sections.

Usefulness of specific checklists. The usefulness of the checklists provided at the end of each section was also evaluated. The results are shown in Table 1.

Table 1

Percentage of Respondents Who Found Checklists Useful

Rating Category				
Extremely Useful	Very Useful	Fairly Useful	Not Very Useful	Not at All Useful
20.8	45.8	27.1	4.2	2.1

Note. n = 48.

Ninety-three percent (93.7%) of the respondents rated the checklists as 'extremely/very/ or fairly useful'.

Clarity of writing. Respondents were asked to rate the clarity of writing of the handbook. The majority (79.2%) of the respondents felt the written content of the handbook was either 'extremely' or 'very clear'. See Table 2.

Table 2

Percentage of Respondents Who Found Handbook Clearly Written

Rating Category				
Extremely Clear	Very Clear	Fairly Clear	Not Very Clear	Not at all Clear
31.3	47.9	18.8	2.1	0

Note. n = 48.

Section organization. With regard to section organization, all respondents felt the sections were either 'very well or fairly well organized'. See Table 3.

Table 3

Percentage of Respondents Who Felt Handbook Was Organized in a Meaningful Fashion

Rating Category		
Very Well Organized	Fairly Well Organized	Not Very Well Organized
63.8	36.2	0

Note. n = 47.

Understanding the synchronization of duties and responsibilities among staff members. Almost seventy-one percent (70.8%) of the respondents felt the handbook did either an 'excellent' or 'very good' job in aiding the understanding of the synchronization of duties and responsibilities among the battalion commander and his staff. See Table 4.

Table 4

Overall Value of Handbook as an Aid in Understanding the Synchronization of Duties and Responsibilities Among the Battalion Commander and His Staff
(in percent)

Rating Category				
Excellent	Very Good	Good	Fair	Poor
20.8	50.0	12.5	10.4	6.2

Note. n = 48.

Understanding the individual staff member's own responsibilities and duties. Battalion staff members who were questioned on this issue felt that the handbook did an 'excellent', 'very good', or 'good' job in aiding the individual (staff member) in understanding his own responsibilities and duties. See Table 5.

Table 5

Overall Value of Handbook as an Aid to Individual Staff Members in Understanding Their Own Responsibilities and Duties (in percent)

Rating Category				
Excellent	Very Good	Good	Fair	Poor
20.0	60.0	20.0	0	0

Note. n = 10.

Job performance. All battalion staff members who had the opportunity to respond to this item felt that the handbook helped them do their jobs more effectively. See Table 6.

Table 6

Percentage of Battalion Staff Members Who Felt Handbook Helped Them Do Their Job More Effectively

Rating Category		
Helped a Lot	Helped a Little	Did Not Help
40.0	60.0	0

Note. n = 10.

When asked how they had used the handbook to help them in their jobs, battalion staff members provided the following responses (20 total responses):

- As a quick introduction to a newly assigned position (15%).
- To help learn the duties of others (20%).
- To assist in synchronizing the individual's work with others (30%).
- As a checklist to make sure a critical task or duty isn't omitted (25%).

- To provide general guidance by the battalion commander to his staff (5%).
- To train the support platoon leader (5%).

Summary

Although the findings may be regarded as preliminary for certain sections, it appears that the handbook was generally well received by the respondents. The handbook was used by selected battalion staff members preparing for their CTC rotation and was seen, for the most part, as a useful guide for staff actions in both the field and in garrison; providing important staff functional area information in a concise fashion. The writing was clear and the sections were organized into meaningful topic areas. The handbook was perceived by all respondents who had used it in preparation for their CTC rotation as a valuable tool to inform the individual staff member of his own responsibilities and duties. Most importantly, they felt that it helped them do their jobs more effectively. The handbook was perceived by all respondents as an effective aid in enhancing their understanding of the synchronization of duties and responsibilities among the battalion commander and the staff.

The following quotes from respondents show the value given to the handbook from the user's perspective.

This handbook was used during an NTC exercise at Fort Irwin CA. I found the Commander's Battle Staff Handbook very useful and was able to share the contents with several National Guard mechanized infantry battalion staff force officers. It (the book) also helped make my job easier to view staff officer functions. I plan to use it during an exercise to organize staff functions for special forces.

Great approach. Covers both garrison and field environment. Lists what is expected from each section, interrelationships, and what can be expected from others...Providing references is a great idea...It's a guide and units can modify accordingly.

Mass distribution, ASAP.

Very good handbook. It is written at battalion level and could be elevated to include brigade level staff operations.

A good product for new staff officers.

A concise, common sense approach to battle staff training...[the handbook] keeps [the] staff labors properly focused-especially integrating who needs to know what. Staff officers must continually remember their portion of the staff action.

It [the handbook] has been very useful to me as a brigade XO in the execution of my duties and instructing my subordinates...This handbook is the best Army publication I have seen in 18 years of service.

Conclusion

To enhance battalion staff synchronization requires that the officer receive the appropriate instruction on staff fundamentals prior to his (or her) first staff assignment. The Commander's Battle Staff Handbook provides sufficient information to the user to learn what the staff functional areas are, how they relate to one another, and how to synchronize supporting staff plans for tactical operations. Making this handbook available to Armor/Infantry Officer Basic Course graduates once assigned to troop units would facilitate the transition from platoon leadership to assistant staff positions, and later to primary staff positions in the battalion.

The handbook represents a partial, but critical solution to a gap that exists between institutional and unit training. It is an effective tool that supports battalion commanders' staff training programs and enhances unit combat readiness.

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Appendix A

Research Product

Commander's Battle Staff

Handbook

With Garrison Duties



15 MAY 1993



U.S. Army Research Institute
Fort Benning Field Unit

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PREFACE

This Research Product, prepared for the Deputy Commanding General for Training, U.S. Army Combined Arms Command, Fort Leavenworth, Kansas, presents information for the maneuver battalion commander and staff to consider. It provides information to determine staff functional capability, assess staff actions, and provide fundamental references for inexperienced staff officers. It describes the core duties of battalion staff officers and key slice liaison officers on the battle staff.

Feedback from field commanders, combat training center (CTC) observations, and research conducted by the Training Systems Research Division of the U.S. Army Research Institute for the Behavioral and Social Sciences supports the need for staff training at the battalion level. The results of this effort have been published in ARI Research Report 1607 (December 1991) Battle Staff Training and Synchronization in Light Infantry Battalions and Task Forces. Current officer training programs do not systematically provide necessary functional area skills. The **Commander's Battle Staff Handbook** serves as an interim tool to meet this critical requirement. The handbook is a reference document, not a complete training program. It can serve as the battalion commander's guide to staff functional duties in combat preparation. It can also be used to give the battalion's new staff officers a starting point to learn their own garrison responsibilities since functional area references are provided. This handbook can not replace functional area skills training and the valuable experience acquired during staff and field exercises. It can, however, be the supportive first step for the enthusiastic staff officer who lacks initial knowledge and comprehension about his duties.

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Unless otherwise stated, whenever the masculine gender is used, both men and women are included. While staff duty positions in maneuver

battalions and liaison positions in slice elements are generally restricted to men, this may not always be the case.

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INTRODUCTION

To The Commander

The material in the **Commander's Battle Staff Handbook** was prepared through reviews of relevant staff materials provided by TRADOC branch schools, interviews with subject matter experts, and from the assessment of unit operations from the combat training centers. You have learned to synchronize your combat power during your experience at Fort Leavenworth, at the Tactical Commander's Development Course, and you have come to realize that you will have staff officers with a wide variety of experience, but not necessarily any that prepares them to fill their staff specific assignments. The purpose of the **Commander's Battle Staff Handbook** is to give you a tool to help you lead, train, and use your staff more effectively. This handbook is, at best, an introduction to staff functional skills. It can never replace formal functional area training, but it will get you and your staff officers started. The information contained in the handbook will provide you and your staff with what they and supporting officers from the brigade slice should know to begin functioning as a team.

To The Commander and Staff

The one issue continually raised during interviews with subject matter experts, particularly with experienced support and liaison officers, was the need to draw in key support staff members during planning. A common attitude expressed by commanders, XOs, and S3s, for example, is that the Fire Support Officer or the S2 as an Intelligence branch officer, must "sell his product." You as the commander, XO, or S3 can not afford to let assigned or attached staff officers wait and decide how best to "break in" to your staff to support your operation. We recommend that you foster a command climate and staff planning policies that force principal staff members to draw in supporting staff, particularly if a regular relationship does not exist across units at home station. The commander must set the example by including at least the FSO and Engineer in the initial and all subsequent staff planning sessions. Ensure that the XO and S3 take the S2 under their wing and train him. Use the checklists provided in some of the key staff sections to encourage active participation in planning and preparing for your operation.

The **Commander's Battle Staff Handbook** provides a brief description of battle staff duties for the XO, CSM, S1, S2, S3, S4, and BMO as well as primary slice element staff officers, the Fire Support Officer and the Engineer. Information is provided so that the staff is aware of other slice elements. These include Signal, Chemical, and Air Defense elements. A section describing the Chaplain's duties is also included. Duty descriptions also consider interaction across staff elements, or how staff activities are synchronized to support planning and preparation for the execution of battalion operations. Recommendations for the commander and principal staff officers are included in the form of checklists, to serve as memory joggers.

Purpose

The **Commander's Battle Staff Handbook** is not intended to be a tactical guide for operations, and it certainly is not intended to be a guide for commanding a maneuver battalion. For the commander, it is intended as an intervention to offer basic staff functional area information to inexperienced staff members. For the staff officer it is a quick reference for the first few days on the job and when there are critical time pressures. It breaks the initial "fog" around what you must do and what the rest of the staff does. Information includes garrison activities to aid the new staff member in getting up to speed. Giving a new staff officer reproductions of specific sections with the admonition, "Do this," is not effective. The commander and staff will gain the maximum benefit from reading the entire handbook. This will give the commander an overview, or refresher look at interrelated staff activities and allow staff officers to acquire basic knowledge and a few references needed to begin to perform their own duties. They will also learn how their activities are integrated and coordinated with the other staff sections and slice elements.

Success on the battlefield will depend on your ability to fight according to the basic tenets of Army Operational doctrine: Initiative, Agility, Depth, Synchronization, and Versatility. You and your subordinate commanders and staff must master these tenets to conduct effective Army operations. Your staff officers must have functional area knowledge and comprehend the related responsibilities of other staff sections in order to integrate staff actions. Applying acquired knowledge during exercises will build experience and staff functional integration.

Organization

The handbook is organized by traditional staff functions, not by Battlefield Operating Systems (BOS). Emphasis is being placed on Personnel (S1) and Logistics (S4) because these two positions are most commonly filled by maneuver branch officers who have received no specific staff functional area training. The Intelligence officers (S2) assigned to maneuver battalions are typically lieutenants and captains who have been trained to be Intelligence Analysts, but have not been trained to serve as S2s on combat arms battalion staffs. Newly assigned principal staff officers may be forced to "learn under fire." They can benefit from the format of brief necessities and supporting checklists. The commander can use the checklists during planning and preparation to ensure that staff actions are being synchronized.

Level of Detail

Note that the **Commander's Battle Staff Handbook** offers only limited details. It is not intended to replace formal training programs, or guide all actions during exercises, or provide a single reference source for everything the staff officer needs. It is a basic, quick reference, to get you started. Staff functional area references are provided.

Checklists

Checklists appear in boxes for quick reference by the user. When a checklist is continued on the next page a dotted line is used to indicate continuation.

XO

INTRODUCTION

The XO is second in command. As the battalion's "chief of staff", and 2IC, he must be prepared to assume the duties of the commander at any time. The commander may use the XO to operate the unit's main CP, the alternate CP, or supervise overall logistical support. He must decide how he can use the XO most effectively given individual staff strengths, mission requirements, and METT-T, and then communicate his intentions clearly.

ASSETS

Coordinating staff officers are responsible directly to the XO. At battalion level, the coordinating staff includes the S1, S2, S3, and S4. Additionally, the special staff, including task force attachments, is directly responsible to the XO during the staff planning process.

PRIMARY XO DUTIES

The XO has primary responsibility for the following areas:

- Establishing staff operating procedures
- Ensuring the commander and the staff are informed on matters affecting the command
- Assembling and supervising the staff during the decision-making process ensuring a coordinated, synchronized plan
- Establishing timelines (1/3-2/3)
- Establishing the required liaison
- Ensuring information flow between the staff and commander on staff recommendations and the commander's decisions

- Representing the commander (when required) and supervising the main CP and its operations
- Monitoring the overall battle and supervising planning of future operations
- Directing the staff
- Displacing the main CP
- Enforcing standing operating procedures
- Deployment and readiness of the battalion
- Serving as the materiel readiness officer and supervising unit status reporting
- Providing for battalion logistical support

STAFF COORDINATION

The XO is directly responsible to the battalion commander to ensure the staff is coordinated, synchronized, and supervised during the decision making process. He is the primary synchronizer of staff actions, both in garrison and in the TOC.

The coordinating staff officers assist the commander by coordinating the plans, activities and operations of the command. Collectively, they have responsibility for the commander's entire field of responsibilities, except in areas the commander decides to control personally or which are reserved by law or regulation.

PLANNING

The XO is actively involved in the planning process. Critical activities performed by the XO include the following:

- Ensures staff responsibilities and tasks are clearly assigned and IAW capabilities
- Enforces standing operating procedures and policies
- Serves as the task master
- Prepares and enforces the time schedule
- Ensures staff coordination is affected through briefbacks, rehearsals, and frequent commo
- Ensures tactical plans are logistically supportable
- Prepares to assume command (if required)
- Ensures tactical plans contain sufficient detail

During the mission planning phase, the XO performs the following key tasks:

- Reviews (with the BICC) the area of operations and the area of interest to ensure thorough understanding of the brigade's mission
- Analyzes acceptable levels of risk
 - Does the superior commander specify a risk he is willing to accept to accomplish the mission?
 - Can an acceptable level of risk be deduced from analysis of the higher headquarters' mission?
- Analyzes planning and preparation time
 - Computes amount of time available from time of execution to receipt of mission
 - Estimates the total time required for the commander and the staff to gather information, process it, make a decision, and produce and issue the order

- Computes**, by reverse planning, the amount of time available to move the unit to the point of execution and to conduct rehearsals
- Ensures** adequate time is available for subordinate leaders to conduct troop leading procedures
- Records** the results of the time analysis by assigning times to tasks that must be accomplished
- Develops (with the S3 or the Assistant S3) the restated mission for the commander's approval
 - Are only the tasks essential to the mission contained in the restated mission?
 - Is the purpose in agreement with the higher commander's purpose?
- After receiving the commander's guidance and intent, directs the staff in the decision making process, e.g., COA development, wargaming
- Develops a detailed time line
- Ensures all staff and special staff are involved in the mission analysis
- Organizes mission analysis briefing and agenda for task force commander

PREPARATION

The XO supervises the staff to ensure that the plan, as written, is executable and coordinated with all primary staff and task force elements. He ensures the plan meets the commander's intent. When plans are revised, the XO ensures that revisions are communicated to all affected. He stringently enforces the time schedule and serves as the task master. Briefbacks and rehearsals are absolutely critical during this phase.

Specific XO/S3 duties and responsibilities during the planning process and during the planning and preparation phases at the main CP may vary. The battalion commander must clearly specify their roles.

EXECUTION

During execution, the role of the XO depends significantly on the command and control plan and the physical location of the Command Group. The battalion commander may use the XO to operate the main CP or the alternate command post. The XO monitors the battle, prepares for possible future operations, and is ready to assume command if required. He assists the commander in synchronizing the battle (primarily CS and CSS) from the main CP.

CONCLUSION

The XO, as the second in command, is the battalion commander's assistant in coordinating and synchronizing the staff. To ensure the XO is appropriately utilized, the following information checklists are provided.

What the XO needs to know from the battalion commander:

- How the battalion commander plans to use him
- Responsibilities in TOC operations
- What his relationship is with the S3
- Decision making authority for the commander/command structure
- Commander's intent and guidance
- Command philosophy

What the battalion commander needs to know from the XO:

- Operating policies and procedures
- Staff coordinated recommendations
- Current status of CBT, CS, and CSS assets within the task force
- Status of available resources
- Operating budget
- Unit Status Report
- Materiel readiness

REFERENCES

ARTEPs

ARTEP 7-20-MTP. Mission Training Plan for the Infantry Battalion.
December 1988.

Field Circulars

FC 7-16. Battalion and Brigade Command and Control. Undated.

Field Manuals

FM 7-20. The Infantry Battalion. 6 April 1992.

FM 71-2. The Tank and Mechanized Infantry Battalion Task Force.
27 September 1988.

FM 90-4. Air Assault Operations. 16 March 1987.

FM 101-5. Staff Organization and Operations. 25 May 1984.

CSM

INTRODUCTION

The CSM is the senior NCO in the unit. He keeps the commander advised of potential situations, procedures, and practices affecting the welfare, morale, job satisfaction, and use of the battalion's enlisted members.

ASSETS

The CSM's most important asset is established through a close working relationship with the 1SGs. The Battalion CSM should establish an open channel of communication with his fellow CSMs and actively incorporate, where possible, their experiences into his day-to-day battalion activities. This will ensure the battalion's enlisted members receive the benefits of this experience, which should translate into more effective unit performance.

PRIMARY CSM DUTIES

Educational Responsibilities

- **Professional Development.** The CSM is the leader, counselor, advisor, and teacher of NCOs through the Noncommissioned Officer Development Program.
- **Education.** As the senior enlisted member of the unit, the CSM must stay abreast of all NCO changes and keep the commander, staff, and the enlisted corps of the command informed.
- **Training.** The CSM has a key role in providing the commander with valuable feedback during the training management cycle. He coaches, mentors, and assists subordinate NCOs on the training management process and is the key to effective performance oriented training.

Unit Policy

- **Administration.** Makes recommendations to the commander regarding assignments, discipline, training, awards and decorations, and uniform regulation pertaining to enlisted soldiers of the command
- **Weight control.** Monitors the unit's Weight Control Program
- **Morale and welfare.** Supports the morale policies and welfare program established by the commander
- **Equal opportunity.** Assists the commander in formulating policies and programs to ensure activities are conducted in proper perspective and without prejudice

- **Sponsorship program.** Ensures a sponsor is assigned to each new arrival to assist with the inprocessing of the soldier and his family and to prepare the soldier to begin his duties
- **Suspenses.** Maintains the accurate and timely accomplishment of suspenses of status reports of his section. He looks out for all attachments to the section and makes them feel a part of the team

Tactical Functions

- **CP defense.** Monitors the defense of the units and command posts, is familiar with all phases of war, and is a master of the basic soldier fighting skills
- **Ration.** Oversees the proper routine during the tactical feeding period paying particular attention to ensure all members get their fair share of ration
- **EPW.** Ensures they are searched, segregated, fed, and cared for properly before turning them over to the proper authority
- **Casualties.** Monitors the timely, effective and dignified evacuation of casualties. Ensures that the wounded soldiers' weapons, equipment and personal effects are secured and marked
- **Resupply.** Ensures that prompt, properly organized and continuous resupply and redistribution of supplies is undertaken as necessary. Serves as external liaison for CSS during combat operations

Senior Leader Responsibilities

- **Leader and problem solver.** Receives taskings from the battalion commander and acts as a trouble shooter
- **Direction.** Guidance and wise counsel to ISGs and NCOs of the command
- **Discipline and standards.** Assists the commander in maintaining high standards of discipline and conduct
- **Standards.** Insists that all soldiers in the command conform to the standards of discipline, dress, and deportment at all times. Serves as the role model and inspires by example
- **Soldier welfare.** Is knowledgeable about all social welfare, functions, and activities and actively participates, where possible, in unit and social functions

STAFF COORDINATION

The CSM is directly responsible to the battalion commander. He is the principal noncommissioned officer of the unit and a key member of the staff. The CSM works directly with all staff members in all phases of every mission to ensure that the commander's intent is being met.

PLANNING

The CSM monitors the planning process.

- Enforces standing operating procedures and policies
- Provides feedback to the commander during the planning phase
- Applies the common sense rule

PREPARATION

The CSM offers advice and expertise to the staff while the plan is being written. He can be helpful in checking that all aspects of preparation are followed through according to plan.

EXECUTION

During the execution the CSM has specific outlined duties. He may, for example, perform critical liaison functions, lead advance and quartering parties, and supervise activities at breach or ford sites. He also must be able to identify potential problems, correct existing ones, and provide feedback to the commander where appropriate.

CONCLUSION

The CSM is the commander's eyes and ears. A CSM has no conflicts of interest. He is dedicated to assisting the commander in directing the unit towards the successful accomplishment of the mission. To ensure that the CSM is effectively utilized, the following information checklists are provided.

What the CSM needs to know from the battalion commander:

- Commander's intent
- How the commander plans to use him
- Command philosophy
- The commander's expectations of a CSM
- Commander's likes and dislikes
- How the commander defines the CSM's job in the unit
- Command focus
- Guidance on social functions

What the battalion commander needs to know from the CSM:

- Training status of unit
- Changes in NCO educational training programs and opportunities
- Welfare, morale, and satisfaction of enlisted members within battalion
- Administration recommendations regarding assignments, discipline, training, awards and decorations, and uniform regulation relevant to enlisted soldiers of the command
- Input on equal opportunity policies established within the unit
- Potential combat technical and tactical deficiencies in the unit and suggestions for improvement

REFERENCES

Army Regulations

AR 611-201. Enlisted Career Management Fields and Military Occupational Specialties (CSM Duties, Responsibilities, and Authority). 31 October 1990.

Training Circulars

TC 601-xx. The Role of the Command Sergeant Major.

Other

USASMA CSM (D) Training Packet. The Command Sergeant Major Handbook. March 1989.

S1

INTRODUCTION

The S1 is the battalion's basic personnel manager. His role has two parts. The functional role of the S1 consists of supervising and coordinating the unit's personnel and administration systems. In addition, he is also entrusted with the traditional role of the adjutant, serving the commander across a wide range of activities.

The S1 is the essential administrative liaison between companies at the battalion and the brigade. He handles personnel actions which flow from the companies to brigade or the military personnel office. Additionally, the S1 performs the personnel functions of special staff officers at higher levels, e.g., PAO.

ASSETS

S1 section. The S1 section consists of the S1 and the PAC. S1 activities are executed from both the combat trains CP and the field trains. The S1, PSNCO, and two administrative specialists collocate with the S4 at the combat trains CP. The PAC is located in the field trains.

S1 personnel at the combat trains CP perform strength accounting, casualty reporting, and CP functions. Those in the field trains perform replacement operations, personnel actions, as well as administrative, postal, legal and finance services. The S1 is the medical service planner for the battalion/squadron. He coordinates with the medical platoon leader (battalion surgeon) and with the medical operations officer to ensure that patient treatment and evacuation are planned and coordinated throughout the battalion area.

Medical platoon. The medical platoon provides unit-level medical support for the battalion. It collects, triages, and treats patients, then either evacuates them or returns them to duty. The medical platoon establishes and applies preventive medicine programs aimed at preventing disease and illness and monitors the field sanitation activities of the battalion. It stocks medical supplies (class VIII) for the battalion and

provides all medical support. The medical platoon is also responsible for maintenance and evacuation of battalion medical equipment needing repair, establishing aid stations, casualty collection points, and contaminated casualty treatment.

Aviation units generally do not have both combat and field trains. The S1 and S4 establish an ALOC that serves as an alternate CP. Aviation units are not authorized a medical platoon. They have a medic section under the headquarters company but no doctor, physician's assistant (PA), or flight surgeon are authorized.

PRIMARY S1 DUTIES

The Adjutant

As the adjutant, the S1 helps to develop and maintain the battalion commander's daily schedule by:

- Knowing where the commander is at all times
- Scheduling visitors from outside the battalion
- Scheduling appointments, briefings, and meetings to avoid conflicts
- Highlighting times and dates important to the commander such as awards and promotion ceremonies, courts-martial, briefings, meetings, and inspections
- Highlighting scheduled leaves/TDY for all key personnel
- Highlighting social engagements, such as dining-ins, hails, farewells, and receptions
- Highlighting commander and staff calls

Additional S1 responsibilities to the commander. In addition to time management, the S1 assists the commander in other ways as well. These responsibilities include:

- Reviewing all correspondence for content and accuracy
- Serving as both a conduit and expeditor of information
- Maintaining a policy book that contains the policies from all higher headquarters. The S1 assists the commander in developing the unit's personnel policies, and keeps a current policy book
- Providing counsel to the command concerning personnel issues
This involves providing assistance and clarification (in such areas as personnel status, assignments, and PAC matters), pointing out deficiencies, shortcomings, and problems
- Ensuring the commander is informed and prepared to attend all conferences
- Ensuring administrative readiness of troops for deployability

Unit Responsibilities

Unit program manager. The S1 typically manages a number of unit programs. He manages the cup and flower fund; directs all social activities and ceremonies; ensures that ceremonies except outdoor ones that include drill (S3's job) are conducted correctly; ensures all protocol and etiquette rules are observed; ensures the unit has a viable hometown news release program; helps develop stress management programs in the unit; encourages participation in active health programs; supervises the battalion's weight control program; represents the commander at the installation morale support fund meetings; implements the commander's safety program; establishes and maintains an active and effective alcohol and drug abuse prevention and control program; and works closely with the S3 and CSM in the establishment and maintenance of effective civilian educational programs for officers and NCOs.

Family care. The S1 takes an active role in the care and support of family members in the unit. He monitors the status of sole parents and married service couples (family care plans); ensures that the PAC knows its responsibilities for noncombatant evacuation operations when required; ensures that soldiers and their spouses know what services the legal assistance and claims offices provide; ensures the unit's soldiers and families know of all the quality of life services available to them; monitors the family support groups for the commander; is familiar with US government and local policies governing marriage overseas, passports, and

citizenship; ensures all sponsors actively assist incoming soldiers to obtain transient and permanent quarters; makes sure soldiers and families know what services are available from the Red Cross; provides a liaison between the unit and Army Community Services; and distributes information to soldiers and families about child development services on the installation.

Key Staff Responsibilities

- Assistant OIC of combat trains CP
- Personnel accounting and strength reporting
- Maintains SIDPERS database
- Deployment strength accounting
 - Maintains status of nondeployable personnel
- Duty rosters
- Managing office systems
- Supervision of civilian personnel
- Management of EPWs
- Rear detachment operations
- Preparation for overseas movement
- Religious activities
- Medical planning
- Casualty management
- Replacement operations
- Postal services
- Administration of UCMJ
- Morale, welfare, and recreation activities
- Awards and decorations

STAFF COORDINATION

As a staff member, the S1 must work closely with other staff members to: facilitate and monitor the accomplishment of command decisions; provide timely and accurate information to the commander and subordinate units; anticipate requirements and maintain current estimates (personnel and loss rate); develop portions of the CSS annex; recommend replacement priorities; determine and recommend courses of action to achieve mission accomplishment; and prepare plans and orders.

The S1 coordinates with the S2 for interrogating prisoners and with the S4 for processing captured equipment and planning transportation requirements. The S1 also coordinates with the medical platoon leader and the medical operations officer to ensure that patient treatment and evacuation, to include additional transportation requirements are planned and coordinated throughout the battalion area. The S1 also coordinates for religious support with the battalion UMT section. He also assumes public affairs responsibilities since no public affairs assets are available to aid the commander at battalion level.

PLANNING

The planning focus of the S1 centers around the personnel and administrative factors impacting soldier and unit effectiveness. These factors are discussed briefly below.

Unit strength maintenance. In assessing unit preparedness, the S1 must focus on the effects of deployability, losses, critical MOS and skill shortages in the battalion (by platoon) and in attached units, projected gains and losses, and any local situations affecting the number of personnel in the unit. He assists company commanders in ensuring deployment standards are current.

Replacements. The primary concerns here for the S1 include listing critical outstanding replacement requirements, status of previous allocation, by unit (when critical to the situation), and location of replacement processing units.

Noncombat matters. The S1 must take into consideration the impact of people, other than soldiers, on the mission of the unit. Examples would include care and support of dependents, third country nationals, EPWs, civilian internees and detainees, DA civilians, and personnel available for labor requirements.

Soldier personal readiness. The S1 is responsible for reporting the status of morale and esprit de corps, and any significant influences on the morale of units.

Services support. The S1 must be able to assess and evaluate the adequacy of personnel service and logistical support services as they impact on troop preparedness and recommend new policy(s) or programs where appropriate.

Organizational climate/commitment/cohesion. In planning the battalion personnel service support needs, the S1 may have to carefully consider (depending on the situation) soldier satisfaction with the unit, identification/involvement with the unit, and unit cohesion.

Personnel estimate. In preparing the personnel estimate, the S1 needs to pay particular attention to troop preparedness issues, including unit strength, casualty estimates, replacements, noncombat matters, soldier personal readiness, and services support. For each COA, the S1 assesses the impact of identified problem areas, trends, and deficiencies for a specified personnel factor on troop preparedness.

The personnel estimate is only one of the estimates the commander considers during the decision process. Although FM 71-2 requires only a hasty or informal estimate, it often is not done at all or is overlooked. The three page estimate shown in the Staff Officer's Handbook is full of items that are certainly useful in situations where the unit has weeks to prepare for the mission but in the high intensity environment of major conflicts, most of those items are not appropriate nor is there time to consider the entire list before the battalion commander needs to give his order. To streamline the personnel estimate process the following formulas can be used in conjunction with the associated factor tables.

Hasty personnel estimate: Offense.

Main Effort Elements		Other Factors	
_____	x _____ = _____	x _____	(visibility)
Combat	Mission	x _____	(enemy fatigue)
Strength	Factor	x _____	(velocity)
		x _____	(surprise)
Combine the four other factor values = _____ x .60 = _____ (1)			
Main Effort Casualties			
Other Axis Elements		Other Factors	
_____	x _____ = _____	x _____	(visibility)
Combat	Mission	x _____	(enemy fatigue)
Strength	Factor	x _____	(velocity)
		x _____	(surprise)
Combine the four other factor values = _____ x .40 = _____ (2)			
Other Axis Casualties			
Support by Fire Elements		Other Factors	
_____	x .32 = _____	x _____	(visibility)
Combat		x _____	(enemy fatigue)
Strength		x _____	(velocity)
		x _____	(surprise)
Combine the four other factor values = _____ (3)			
Support by fire Casualties			

ADD (1), (2), and (3) = _____ x .72 = _____
 Total Number of
 Casualties

Combat Strength = number of soldiers participating

Mission Factor = select value from table of weighting factors

Other Factors = select value(s) from table of weighting factors

Hasty personnel estimate for the offense: Table of weighting factors

- Mission factor
 - Meeting engagement (.24)
 - Hasty attack (.30)
 - Deliberate attack (.38)
 - Attack of strongpoint (.64)
 - Support by fire (.32)
- Other factors
 - Visibility
 - day (1.0)
 - night illum (.9)
 - night (.7)
 - Enemy fatigue
 - rested (1.0)
 - 24 hrs no rest (.8)
 - 48 hrs no rest (.6)
 - Velocity
 - no velocity gained during the attack (1.0)
 - moderate velocity maintained (.9)
 - high velocity maintained (.7)
 - Surprise
 - minimum (1.0)
 - substantial (.9)
 - complete (.7)
- Additional considerations
 - Medical assets available
 - Impact of EPW
 - Replacements expected (12 hrs/-24 hrs/-48 hrs)

Hasty personnel estimate: Defense.

Against Enemy Main Effort Elements		Other Factors	
$\frac{\text{Combat Strength}}{\text{Mission Factor}} \times \frac{\text{Mission Factor}}{\text{Mission Factor}} = \frac{\text{Mission Factor}}{\text{Mission Factor}}$	$\times \frac{\text{Mission Factor}}{\text{Mission Factor}}$	$\times \frac{\text{Mission Factor}}{\text{Mission Factor}}$	$\times \frac{\text{Mission Factor}}{\text{Mission Factor}}$
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Combine the four other factor values = _____ x .54 = _____ (1)		Against enemy main effort	
Against Enemy Secondary Efforts		Other Factors	
$\frac{\text{Combat Strength}}{\text{Mission Factor}} \times \frac{\text{Mission Factor}}{\text{Mission Factor}} = \frac{\text{Mission Factor}}{\text{Mission Factor}}$	$\times \frac{\text{Mission Factor}}{\text{Mission Factor}}$	$\times \frac{\text{Mission Factor}}{\text{Mission Factor}}$	$\times \frac{\text{Mission Factor}}{\text{Mission Factor}}$
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Combine the four other factor values = _____ x .45 = _____ (2)		Against enemy secondary efforts	
ADD (1) and (2), = _____ x .72		= _____ Total Number of Casualties to be Evacuated	

Hasty personnel estimate for the defense: Weighting Factors

- | | |
|---|-------|
| • Mission factor | |
| -Hasty Defense | (.32) |
| -Deliberate Defense | (.19) |
| -Strongpoint | (.11) |
| • Other factors | |
| -Visibility | |
| day | (1.0) |
| night illumination | (0.9) |
| night | (0.7) |
| -Enemy fatigue | |
| rested | (1.0) |
| 24 hrs no rest | (0.8) |
| 48 hrs no rest | (0.6) |
| -Posture | |
| Hasty | (1.6) |
| Improved | (0.9) |
| Prepared | (0.7) |
| • Additional considerations | |
| -Medical assets available | |
| -Impact of EPW | |
| -Replacements expected (12 hrs/-24 hrs/-48 hrs) | |

Based on the casualty rates and the number of medical evacuation vehicles in the task force, the S1 can determine if current assets are sufficient or if additional assets are required. He can also determine if the medical assets available need to be tasked organized differently to meet the current need.

PREPARATION

The S1 continues to monitor unit strength through reporting procedures established in the unit TACSOP.

EXECUTION

During the execution phase of the operation, the S1 coordinates with the BMO, S4, and medic to ensure that a fully crewed, equipped, armed, and fueled weapon system is provided back to the maneuver commander. The S1 is also responsible for ensuring the following functions are accomplished accurately, smoothly, and efficiently. The accomplishment of these functions is critical for the effective management of combat-essential personnel information.

Replacement operations. Replacement operations include the coordinated support and delivery of replacements and RTD soldiers. It includes orders issuance, personnel accounting, logistical support, processing and transportation. It depends on the strength management function for information on where to deliver replacements and RTD soldiers.

Strength management. Strength management assesses an organization's combat power, plans for future operations, and assigns replacements on the battlefield. It predicts the need for replacements and provides a mixture of individuals and small units. It depends entirely on the personnel accounting and strength reporting function to provide critical strength information to support the information requirements of the current battle. It depends on personnel data base management to support the information requirements of the future battle.

Personnel accounting and strength reporting. Personnel accounting and strength reporting accounts for soldiers, reports their duty status, and serves as the foundation for critical battlefield decisions. Personnel accounting and strength reporting depends on personnel data base management for the necessary tools to manage the reconciliation process.

Casualty management. Casualty management encompasses two functions: casualty operations and casualty management. **Casualty operations** records, reports, and accounts for casualties promptly and efficiently. It uses postal operations as the means for redirecting the personal mail of soldiers who become casualties. It depends on personnel accounting and strength reporting to locate soldiers who have been evacuated. **Casualty management** coordinates the personnel and logistical processes involved in casualty management at all levels.

Personnel information management. Personnel information management provides a record of critical personnel information about soldiers to support battlefield decisions and to meet the nation's obligation to retain historical information for its veterans. It also provides a manual source of information on skills, grades, numbers, and physical limitations as a backup to the electronic personnel data base.

Personnel data base management. Personnel data base management consolidates current and projected personnel information on soldiers and units in a number of command data bases (SIDPERS). This information serves as the basis for command decisions and projected battlefield requirements. It depends on personnel information management and personnel accounting and strength reporting for information from which to update the data base.

Postal operations. Postal operations manages and operates a postal network to move, deliver, and collect mail in the deployable force. It delivers official mail, including critical spare parts and medical supplies, and provides an alternative delivery system for personnel information. Postal operations depends on the personnel accounting and strength reporting function to know where soldiers are on the battlefield, and the casualty function to determine the status of casualties and redirect their mail.

Awards and decorations. The S1 receives recommendations for awards and decorations with witness statements, processes the recommendations, and forwards them to higher headquarters.

CONCLUSION

The S1 is a vital link in the commander's staff as he supervises the health, morale, and general welfare of the battalion. To ensure that the S1 is appropriately utilized, the following information checklists are provided.

What the S1 needs to know from the battalion commander:

- Mission
- Commander's concept of operation
- Commander's intent
- Task organization
- The enemy situation
- Time available
- Chain of command
- How the commander can be located
- Rehearsal time and location

What the battalion commander needs to know from the S1:

- S1 estimate
 - Number of casualties by maneuver unit at expected enemy contact locations
 - Status on the delivery of replacements and RTD soldiers
 - Unit combat power
 - Ability to execute future operations based on present combat strength
- Duty status of soldiers
- Casualty reports
- Location of the PAC
- Emergency medical and preventive medicine measures
- Reconstitution plan
- Deployment status

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S2
(BICC)

INTRODUCTION

The battalion commander has specific information needs relating to the unit's area of operation and specific tactical interests. The two critical categories of information available to both the battalion and brigade commander are **intelligence** and **combat information**.

Intelligence. Intelligence is derived from processing all available information known about the enemy forces, their composition, disposition, intentions, their locations, direction, speed, and combat readiness. Expeditionary processing and analysis, timely production, and rapid dissemination of intelligence is necessary to plan, direct, and support the battalion's close operations.

Combat information. Combat information is data possessed by the battalion which meets the commander's immediate battlefield needs. Due to the perishable nature of the information and/or its criticality to the situation, the S2 must rapidly process it in time to satisfy the commander's requirements. His "tools" for rapid processing include his knowledge of the enemy (doctrinal templates) and his situational and event templates.

The S2 is responsible for collecting, analyzing, and disseminating information about the enemy and the area of interest. The S2 also prepares the collection plan designed to support the staff-developed decision-support template.

ASSETS

The battalion relies primarily upon the combat information provided by its organic, attached, and supporting IEW resources to execute all missions assigned. The **principal IEW resources in the battalion** include **scouts, maneuver companies, patrols, OPs, and FISTs**. Field artillery, military intelligence [to include ground surveillance, HUMINT, and SIGINT (low-level voice intercept-LLVI) teams], Army aviation, close air support, air defense artillery, combat engineers, and various combat service

support units all provide the battalion with additional resources to satisfy its IEW requirements.

The battalion's organic, attached, and supporting IEW resources are capable of providing vast amounts of information about close-in enemy forces. The ADA C³I system and MI GSR resources provide early warning and indications of enemy ground activity out to and beyond the limits of the battalion's AO. GSR teams can be attached to a battalion. They can be augmented by REMBASS. These assets can acquire, track, and monitor enemy forces as they enter the battalion's AO. Field artillery FISTs acquire, track, and report close-in enemy forces for immediate destruction. The field artillery battalion's G-36 radar can locate enemy mortars and artillery batteries affecting the battalion's operations. It can also provide early warning for impending artillery or mortar firings into the battalion sector. Patrols, night observation devices, and observation posts conducted, used, and established by the battalion's companies and scouts also acquire, confirm, report, track, and monitor enemy forces in the close operations area.

PRIMARY S2 DUTIES

The S2 is primarily concerned with directing and coordinating the collection, reporting, and dissemination of combat information and targeting data. He plans and supervises (under the direction of the S3) reconnaissance and surveillance (R & S), amplifies IPB products received from brigade based on the battalion commander's PIR, and forwards requirements that cannot be collected by the battalion's assets to the brigade S2.

The S2 directly supervises the tactical intelligence officer, who is part of the two-man BICC. The BICC provides combat information and acts as the intelligence resource management element for the battalion. The BICC assists the S2 in such tasks as:

- Developing and maintaining the intelligence data base
- Planning and managing the battalion collection effort along with the R&S plan
- Integrating information and intelligence from all sources
- Processing and disseminating intelligence information
- Preparing intelligence summaries and reports
- Assisting the S3 in evaluation of the command's OPSEC posture
- Assisting the S3 in identifying friendly vulnerabilities to enemy intelligence collection systems
- Assisting the S3 in identifying the type and amount of OPSEC support required

Additional S2 Duties

- Receives and analyzes mission
- Requests support/information from higher
- Distributes maps/imagery/sketches (maintains accountability)
- Briefs staff on abbreviated intelligence estimate to assist their planning
- Analyzes terrain
- Analyzes weather
- Evaluates threat
- Integrates threat evaluation with battlefield area evaluation, terrain, and weather analysis
- Develops R & S plan/overlay to find high payoff targets and to support the DST
- Develops high value target list
- Writes intelligence annex to OPORD
- Plans EPW processing with S1 and S4
- Updates PIR
- Disseminates critical reports and probable enemy course of action to subordinate units
- Submits reports to higher as required

- Coordinates with entire staff to develop IPB
- Tracks enemy locations and BDA
- Solicits input from other staff officers and attachments concerning enemy employment of assets

The IPB process is a total staff effort. Relying solely on the S2 to do it will not work.

STAFF COORDINATION

Once the mission has been received, the S2 performs the following coordinating activities:

- Upon the commander's approval, the S2 translates PIRs and IRs into specific intelligence requirements, reconnaissance, and surveillance missions for subordinate, attached, and supporting units and requests information from the next higher echelon
- Participates in the targeting cell and helps develop the commander's high payoff target list
- Coordinates with the FSO for inclusion of field artillery target acquisition systems
- Works with the chemical officer to determine indicators of possible chemical attack, and, if found, works together to develop the IPB
- Works closely with the staff engineer to coordinate and consolidate command requirements for weather and terrain analysis support, in addition to having responsibility for air threat
- Performs rapid target and situational development activities before and during combat, providing pertinent information to subordinate, higher, and adjacent units

- Develops situation template of enemy reconnaissance to lay ground work for S3's security planning
- Coordinates R & S plans with S1/3/4, battalion signal officer (BSO), FSE, TF engineer, ADA, unit commander of area in which teams will operate, and adjacent and higher S2/G2. (Note. The S3 is the responsible staff officer to resource and implement R & S plan)
- Assists the FSE in the development of target selection standards
- Advises higher S2 of R & S plan
- Requests support from higher S2/G2 (requests for intelligence information, imagery requests)
- Assists/supervises the S3 in targeting battalion weapon systems, planning, executing, and assessing battle damage results
- Plans and supervises the implementation of countersurveillance measures to support all operations
- Supervises the command's personnel and information security programs
- Develops air avenues of approach into the task force AO in coordination with the ALO and ADA officer whenever possible
- Participates in wargaming enemy COAs

PLANNING

Intelligence Preparation of the Battlefield (IPB)

IPB is performed to determine and evaluate enemy capabilities, vulnerabilities, and probable COAs. The thrust of IPB is to support the commander in the decision making process. The S2 produces and briefs the majority of the IPB products, but input and coordination must come from the entire staff. Each staff officer with an enemy BOS functional area must assist the S2. It must be a team effort to prevent COAs from being developed in a vacuum. During the staff planning process the XO/S3 must ensure this occurs.

STAFF IPB CHART

<u>Event</u>	<u>Doctrinal Product</u>
• Division WO-----	Begin analysis of the AO
• Division OPORD Mission Analysis-----	OCOKA, Weather, Enemy capabilities by BOS, Doctrinal template
• Publish WO Commander's Guidance-----	PIR
• COA Development-----	Event and Situation template
• Wargaming Decision Brief-----	Collection plan, DST
• Brigade OPORD R & S plan-----	Intelligence Annex and Estimate, R & S plan

Note. Continuation of the staff planning process is dependent on the S2/staff producing the items listed above.

The importance of complete, accurate IPB to success in battle can not be overemphasized. The five steps in the IPB process include the following:

- Battlefield evaluation
 - Determine areas of operation and interest
 - Consider METT-T, commander's concept of operation, time, width, height (airspace), electro-optical factors
- Terrain analysis
 - Develop terrain data base and terrain factor overlays
 - Develop modified combined obstacle overlays
 - ID/analyze avenues of approach using OCOKA factors
 - Consider
 - Line of sight
 - Movement rates
 - Mobility corridor
 - Cross over corridor
- Weather analysis (performed in conjunction with terrain analysis)
 - Develop weather factor analysis and critical values
 - Develop weather data base and weather factor overlays
 - Determine impact of weather on troops, terrain, equipment, friendly/enemy operations, maneuverability and observation
- Threat evaluation
 - Develop threat data base
 - Evaluate threat capabilities
 - Develop doctrinal template file
- Threat integration
 - Develop situation templates (down to company level)
 - Develop event template and collection matrix
 - Assist in development of the decision support template

Reconnaissance/Counterreconnaissance and Security Planning Steps

Planning must be precise and timely to concentrate the battalion's limited reconnaissance assets on PIRs and provide sufficient time to gather information. To win the reconnaissance battle, it may be necessary to assign other assets, e.g., engineers (obstacle intelligence), maneuver forces,

GSR, FIST-Vs/COLT/artillery FOs, etc. Unity of command is a must but if there are more assets in the reconnaissance force than a scout platoon leader can control, other C² headquarters may be necessary such as the HHC commander or a maneuver commander.

Although the S2 plans for R & S and recommends what assets to use, the S3 is responsible for tasking subordinate units/attachments and implementing the R & S effort. The S2 can refocus the effort as intelligence is collected. The S3 is also responsible for planning, resourcing, and implementing the security plan. The S2 lays out the enemy reconnaissance situational template as formulated for that plan.

- Consider METT-T
 - **Mission** (commander's intent, unit locations, scheme of maneuver)
 - **Enemy** (use IPB to develop PIR/IR/NAIs/DPs/collection requirements-consider higher and lower Headquarters' PIR)
 - **Terrain** (LOS/obstacles/routes to and from R & S sites, alt. selection/weather effects)
 - **Troops Available** (organic and higher R & S asset availability and capability)
 - **Time** (planning/emplacing/reporting)
- Issue warning order to R & S asset leaders
- Develop R & S plan and overlay using principles of reconnaissance
 - **Aggressiveness/Secrecy/Complementarity/Time/Accuracy/Continuity/Relevance/Focus combat power**
- (Note. R & S assets should be rehearsed, either separately or as part of the task force combined arms rehearsal)
- Develop communications plan/reporting schedule - plan alternate comms paths
- Coordinate plans with S1/3/4, BSC, PSE, TF engineer, ADA, unit commander of area in which teams will operate, adjacent and higher S2/G2
- Task/brief R & S team leaders (task force commander or S3 responsibility)
- Receive R & S team leaders' backbrief
- Ensure all R & S elements are aware of and understand the commander's high payoff targets
- Advise higher S2 of R & S plan
- Request support from higher S2/G2
- Write R & S annex to OPORD
- Write R & S tasks into OPORD (tasks to subordinate units)
- Evaluate reports/review requirements/determine intelligence gaps
- Update R & S plan (task R & S assets/request support from higher)
- When possible debrief R & S teams/patrols
- Plan for future operations

PREPARATION

The S2 ensures the mission and concept of the operation are understood so that higher units' objectives are achieved. The S2 continuously prepares and updates all intelligence attachments, inspections, and rehearsals of plans and major contingencies at all levels, including reserves, IAW mission priorities.

EXECUTION

During the execution phase of the mission, battalion information requirements from the S2/BICC include the following:

- Accurate and timely SALUTE reports on contacts and verification of initial reports
- Identification and verification of locations of all high payoff targets
- Location, direction, and speed of platoon and company size elements within the enemy's first-echelon battalions
- Location, direction, and speed of enemy second-echelon battalions, which indicate the first-echelon regiment's main effort
- Locations and activities of follow-on battalions in enemy second echelon regiments
- Disposition and strength of enemy defensive positions and fortifications
- Location of antitank positions, crew served weapons, ADA positions, individual vehicle positions, and dismounted infantry
- Locations of barriers, obstacles, minefields, and bypass routes
- Effects of terrain and prevailing winds
- Significant changes to current maps/imagery (if it impacts on current operation)

The S2 is also involved in the following activities during the execution of the mission:

- Supervises reconnaissance, counterreconnaissance, and surveillance activities (in coordination with the S3)
- Updates the intelligence estimate
- Keeps XO informed about the enemy situation
- Works closely with the FSO and assistant S3 to ensure information is passed between staff sections
- Participates in targeting meetings
- Helps update the commander's high payoff targets

CONCLUSION

The S2 provides the intelligence and counterintelligence service for the battalion. His success depends to a large extent on the relationship developed between himself and the commander and the S3. If the S3 and commander do not have confidence in the S2, then tactical plans will not be focused on the enemy and will subsequently fail. This point is critical, because in garrison the S2 and S3 seldom interact, yet in the tactical environment they must work together and have confidence in one another. The commander and S3 must ensure that a relationship is developed that quickly instills this mutual confidence.

To ensure that the S2 is appropriately utilized, the following information checklists are provided.

What the S2 needs to know from the battalion commander:

- Mission
- Commander's concept of operation
- Commander's intent
- High payoff targets
- Commander's PIR
- Time available
- Assets available for R & S
- How the commander can be located
- Chain of command
- Rehearsal time and location

What the battalion commander needs to know from the S2:

- S2 estimate
- NBC threat
- Weather, enemy, terrain
- Location of antitank positions, crew served weapons, individual vehicle positions, and dismounted infantry
- Location of barriers, obstacles, mine fields, and bypass routes
- Intelligence
- Combat information
- Recommended priority intelligence requirements
- Commander's reconnaissance - surveillance target acquisition assets
- R & S plan
- Counterintelligence measures

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S3
(S3 Air)

INTRODUCTION

The S3 is the battalion commander's principal staff officer for matters concerning operations, plans, organization, and training. He is the commander's main assistant in coordinating and planning the battle. The nature of the operations officer's responsibilities requires a high degree of coordination with other staff members. The S3 is aided by the S3 Air and an S3 section.

ASSETS

The S3 Air is located at the main CP and functions as the Battle Captain and XO's deputy. He coordinates the employment of CAS with the FSO and the TACP, as well as with the air defense leader. He integrates CAS into the commander's scheme of maneuver. The S3 Air assumes the S3's duties when the S3 is absent in garrison. Tactically, he steps in for the XO at the TOC. The S3 Air supervises the battalion's informal A2C2 element, which consists of representatives of the fire support and air defense elements and of the tactical air control party.

The S3 section, trained by the S3, is employed to control and operate forward with the command group when required. The configuration of the S3 section is very different in garrison. The organization and function of the section should be clearly defined for both garrison and tactical deployment. Specific issues such as who is responsible for the TOC vehicle, the TAC CP, who will man which vehicle/section, and where specific sections will deploy can be resolved by the operations sergeant major and the S3 Air/Assistant S3.

PRIMARY S3 DUTIES

The S3 has primary coordinating staff responsibility for the following areas:

Operations. The S3's operational responsibilities involve:

- Supervising R & S surveillance activities
(The S2 assists as an advisor or as the expert on all collection assets available)
- Maintaining a current operation estimate of the situation in coordination with other staff officers
- Preparing, authenticating, and publishing the overall tactical SOP with contributions from other staff sections
- Preparing, coordinating, authenticating and publishing operation plans and orders; and reviewing plans and orders of subordinate units
- Recommending priorities for allocating critical resources of the command, including time, personnel, supplies, and equipment, such as: ammunition basic loads, RSR of ammunition, unit replacement requirements, and electronic frequencies
- Recommending task organization and assigning tasks to subordinate elements of the command
- Using resources to accomplish both maneuver and support, including resources used for deception purposes
- Coordinating all aspects of maneuver with support
- Recommending integrated schemes of tactical maneuver and/or dispositions and fires, including nuclear and chemical fires
- Recommending boundaries and other control measures
- Recommending the general locations of command posts
- Designating areas for bivouacking, quartering, and staging units
- Preparing operational records and reports
- Exercising staff supervision over EW, PSYOPS, OPSEC, CMO, deception activities, and rear area protection
- Considering airspace management aspects of operations
- Integrating all combat, CS, and CSS assets
- Designing C² structure to control operations

Organization. The S3's role in the area of organization includes:

- Determining unit composition most likely to accomplish mission
- Organizing and equipping units; recommending types of forces to be employed
- Assigning, attaching, and detaching units, detachments, or teams
- Receiving units, detachments, or teams and orienting, training, and reorganizing them as necessary

Training. Training responsibilities of the S3 include:

- Identifying training requirements based on combat and garrison missions and the training status of the unit
- Ensuring that training requirements for combat are oriented on conditions and standards of combat
- Preparing and carrying out training programs, directives, and orders; and planning and conducting field exercises
- Determining requirements for and allocations of training resources, including ammunition for training, ranges, facilities, and training aids and devices
- Organizing and conducting internal schools, and obtaining and allocating quotas for external schools
- Planning and conducting training inspections, tests, and evaluations
- Compiling training records and reports
- Maintaining the unit readiness status of each unit in the command
- Planning the command operating budget for training and monitoring use of training funds to support training programs
- Conducting battalion training meetings
- Preparing annual and quarterly training guidance for the battalion

STAFF COORDINATION

The S3 advises the battalion commander on combat, CS, and operational matters; organization, and training. He is responsible for any MTOE changes; as well as scheduling, in coordination with the S4, new equipment training teams to support arrival of new material. He is also responsible, with the aid of other staff officers, for integrating the following operations into the tactical plan: psychological operations, electronic warfare, jamming/ECM operations, operations security, deception, counterreconnaissance, and tactical troop movements.

The S3 coordinates with the XO and battalion signal officer on the location of the main CP. He coordinates the activities of the S2, the FSO, the FAC and, if supporting, the engineer and ADO, to ensure their plans support the commander's concept. He also supervises the chemical and signal officers and assistant S3/S3 Air. Finally, he coordinates closely with the XO, S1, BMO, and S4 to ensure tactical plans are logistically supportable.

PLANNING

The S3 is actively involved in all phases of the planning process.

- Using the terrain analysis provided by the S2, the S3 assesses areas of operations as they impact on friendly and enemy capabilities
- Develops high payoff target list in coordination with targeting cell members
- Develops a scheme that will optimize observation and fields of fire, based on terrain, visibility conditions, and weapon system capabilities (for both friendly and enemy forces)
- Using intelligence provided by the S2, analyzes enemy's most recent activities and intentions
- Evaluates possible enemy COAs identified by the S2
- Approves the R & S plan
- Projects status of unit, relative to the type of operation
- Develops and maintains the troop list, including review and revision to ensure assignment of the numbers and types of units needed to support and accomplish the mission
- Identifies command and support relationships
- Determines location of combat, CS, and CSS units
- Assesses mission requirements and recommends additional resources if required
- Develops friendly COAs
- Participates in staff wargaming of COAs (leads if XO is unavailable)
- Estimates the numbers and types of units to be organized and the priority for phasing in or replacing personnel and equipment in the units
- Refines OPORD in accordance with information updates
- Develops task force R & S plan with the S2 and FSO
- Develops counterreconnaissance plan with input from S2 and FSO
- Drives unit/task force rehearsals

S3 Air Planning Actions for Air Assault Operations

During the planning phase, the S3 Air may be responsible for executing some, or all, of the following actions depending on the specific operation:

- Receives warning order
- Receives personnel status from S1
- Receives equipment status from S4
- Receives enemy situation briefing from S2
- Receives initial information from air mission commander (AMC)
- Analyzes AMC's initial information for available assets
- Begins preparation of air movement table
- Issues warning order
- Processes air requests from S3
- Obtains PZs from S3; provides PZs to fire support coordinator and staff as needed
- Establishes liaison with TACP; coordinates preplanned TACAIR
- Provides available flight route information to S3
- Receives task force commander's concept
- Obtains any additional tactical air requirements from FSCoord
- Initiates requests for TACAIR cap (cover) and offensive air support
- Obtains logistic PZs from S4
- Completes air movement table; submits to S3 for approval
- Distributes air movement table
- Obtains subunit airloading tables
- Consolidates airloading tables; provides to task force commander, S3, XO, and S1
- Receives OPORD
- Coordinates air mission briefings

The ALO or the aviation brigade/battalion commander's representative receives available flight routes from the S2; computes flight route time and distance; and obtains LZs, flight routes, and aircraft allocations from the supporting aviation unit S3 for the supported unit S3 for dissemination to his staff and subordinate units.

S3 Air Planning Actions: Mission Analysis

The S3 Air plays an important role in the mission planning process through the following activities:

- Analyzing the purpose of the brigade mission and the purpose of the commander two levels up
- Reviewing the higher commander's overall deception plan and ensuring that friendly forces are not positioned contrary to the higher commander's deception plan
- Identifying tasks to be performed: specified, implied, and essential
- Identifying limitations placed on the task force by the higher headquarters
- Addressing the following questions:
 - What task was I given?
 - What specific results must I attain in terms of the enemy, terrain, or a friendly force?
 - What was the purpose of the task?
 - How does this task relate to the main effort?
 - What is the unique contribution the task force mission makes to the brigade's mission and concept?
 - What limitations have been placed on my freedom of action?
 - If these are limitations, why has my superior commander limited my possible courses of action?

PREPARATION

The S3 continues to monitor all preparation and coordination. He and his staff ensure that the plan, as written, is fully prepared to be implemented. All elements of the S3 section are actively involved in this process. The S3 also assists the XO in the supervision of all primary staff and slice representatives.

EXECUTION

At the commander's discretion, the S3 may be positioned to command and control an area that the commander cannot monitor.

CONCLUSION

The S3, as the battalion's operations officer, is the commander's main assistant in coordinating and planning the battle. Note that the commander must clearly define roles for the XO and S3 dependent on the tactical situation and operational requirements. To ensure that the S3 is appropriately utilized, the following information checklists are provided.

What the S3 needs to know from the battalion commander:

- How the commander plans to use him
- S3's relationship with the command structure and the XO
- Commander's intent/planning guidance
- Everything the commander knows

What the battalion commander needs to know from the S3:

- Current operation estimate
- Command resource allocation priorities including time, personnel, supplies, and equipment.
- Proposed task organization and mission responsibilities of subordinate units
- Proposed tactical maneuver, dispositions, and fire schemes
- General locations of command posts
- Overview of EW, PSYOPS, OPSEC, deception activities, CMO and rear area protection measures
- Overview of airspace considerations
- Unit training requirements
- Proposed unit training programs/budget/resource allocations
- Unit readiness status

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**S4
(BMO)**

INTRODUCTION

Sustainment is as important to success as any part of the battle plan. The battalion commander must be aware of both the operational and logistical possibilities and limitations of his situation. The S4, aided by the S4 section and specialized platoons (support, maintenance) organic to the headquarters and headquarters company (HHC), manages the battalion's logistical support.

ASSETS

Battalion logistical support is provided by the support and maintenance platoons under the supervision of the S4. The S4 section is responsible for providing ammunition, fuel, food, water, maintenance, and transportation services to the companies. The battalion supply sergeant locates in the field trains CP, acting as section sergeant for the company supply sergeant and also assists the HHC commander in monitoring the administrative and logistics (A & L) net during the preparation and execution phases. He assists the S4 in getting needed supplies forward and may, at times, move up to the combat trains CP to provide assistance in specific areas. The HHC commander and the support platoon leader locate in the battalion field trains and respond to the forward units' support requirements. Significant differences in logistical capabilities exist between light and heavy battalions. These differences are addressed in this section.

Support platoon. The support platoon is responsible for the transportation of fuel, ammunition, and supplies, and the preparation and delivery of meals (for the light battalion meals are provided by the HHC brigade mess). The support platoon leader acts as the assistant S4. He is responsible for the organization and timely dispatch of LOGPACs. The movement of supplies and evacuation of wounded and KIA are both dependent on well coordinated support platoon operations. In heavy battalions, the medical platoon's organic ambulances are the primary means of casualty evacuation.

Maintenance platoon. The maintenance platoon operates from the unit maintenance collection point (UMCP), field trains, and company/team combat trains. It is responsible for the battalion's PLL and maintenance records. The platoon provides maintenance teams to support the battalion/task force maintenance mission. The platoon performs unit maintenance of all equipment as far forward as possible except for COMSEC and medical. In addition, the platoon interfaces with the forward support battalion (FSB) and the intermediate direct support (IDS) maintenance support team (MST). It provides unit level maintenance for the battalion/task force equipment.

The platoon leader is the battalion maintenance officer (BMO) for infantry battalions other than light. He is assisted by the battalion maintenance technician (BMT) and battalion maintenance sergeant (BMS).

BMO responsibilities include the following:

- UMCP operations and controls maintenance support within the maintenance platoon
- Directs the maintenance effort to repair jobs requiring no more than four to six hours to complete
- Shifts maintenance assets to meet battalion/task force requirements according to the commander's priorities
- Maintains close contact with the battalion XO and S3 to remain current on the tactical situation
- Coordinates maintenance support with the battalion S4 and the FSB's support operations section
- Coordinates with the S4 to determine the location of the UMCP based on the elements of METT-T, which is typically located on the battlefield in the combat trains area
- Focuses on placing maintenance support forward to sustain maximum combat power
- Coordinates with the FSB MST and establishes maintenance priorities. Ensures that the IDS MST's requirements are coordinated with the FSB's support operations office

- Works with the BMT and BMS in coordinating unit maintenance operations
 - Ensures his BMT is aware of the support priority and manages maintenance in the forward area of the battlefield
 - Ensures, through the BMT, that the repairs on site and in the company trains receive first priority of his maintenance resources
- Ensures that at least one PLL is placed in the field trains
 - :[In the UMCP, the BMO will normally position PLL necessary to support at least two of the maneuver companies and headquarters company elements operating in the forward area]

The BMO also plays a critical role in the following unit maintenance operational areas:

Task Force Support

Maintenance Support of Task Forces

- Task organizes maintenance requirements
- Organizes platoon into maintenance teams
- Controls company maintenance teams sent forward

Maintenance Operations

- Organizes the maintenance platoon to support task force operations
- Contributes to the development of the logistics annex of the operations plan or the SOP to include maintenance support requirements for the company/combat/and field trains
- Organizes the UMCP with maintenance platoon personnel, recovery vehicles, tool trucks, and PLL assets

Support of Offensive, Defensive, and Offensive Operations

- Monitors the tactical situation to support the attack
- Informs the S3 and S4 of the specific locations of the UMCP
- Coordinates maintenance requirements with the XO addressing the current situation, priority of effort, and plans for the next operation

Recovery

Responsibility

- Responsible for recovery of heavy equipment beyond the owning unit's capability
- Manages the battalion's recovery operations using recovery equipment of the maintenance platoon

Recovery Management

- Coordinates recovery operations with the overall repair effort to best support the commander's priorities and the tactical situation

Repair and/or Recovery Plan

- Develops a plan of action for the disabled equipment based on the request for assistance. His evaluation should include a review of the following:
 - Tactical situation
 - Work load
 - Availability of maintenance and recovery personnel
- When the extent of damage/failure can not be determined, the BMO plans a recovery mission but may also send maintenance personnel to attempt on-site repair
- Assigns the repair or recovery mission to a maintenance team. Ensures detailed checklists are used in preparing for on-site repair

Special Recovery Considerations

- Develops specific procedures for conducting maintenance/repair operations under NBC attack, recovery of foreign equipment, and joint multinational operations

Sustainment Operations

BMO's Role

- Responsible for developing the battalion combat readiness sustainment program
- Ensures that:
 - Leaders' roles are clearly defined
 - Procedures for the maintenance platoon, its sections, and the maintenance team leaders are clearly defined
 - Units receive support LAW established program and procedures

For the light battalion, unit-level maintenance is consolidated at brigade. During task force operations either the (light battalion) S4 or the HHC XO assume maintenance responsibilities by coordinating DS and slice maintenance elements.

PRIMARY S4 DUTIES

The S4 is primarily concerned with the sustainment of the battalion. To execute the tactical sustainment requirements of the battalion, the S4 must take an active role in the following areas:

- Manning support which includes rationing, clothing, and individual equipment
- Fueling the force
- Arming the force
- Moving personnel and equipment to include managing transportation networks
- Fixing for the purpose of preserving weapon systems and equipment
- Movement and placement of the combat trains CP
- Emergency resupply
- Communication with lower, higher, and adjacent headquarters focusing on combat trains CP to combat trains CP
- Protecting the sustainment system (rear area security)
- Management of MTOE
- Redistribution of assets
- Providing support for EPWs
 - Transportation
 - Rations
 - MP coordination
 - Facilities
- Producing the CSS plan for the battalion that includes:
 - Main supply routes
 - Proposed logistic release point (LRP) sites
 - Class IV/Class V supply points
 - Casualty collection points
 - Evacuation plan for evacuation and care of deceased remains
- Managing the operating budget

STAFF COORDINATION

The S4 must work closely with the XO and the S3 to ensure that the operational plan can be fully supported. He must backbrief the maneuver elements on the support plan to ensure that it meets all of the maneuver elements' needs. He is closely associated with the S1 as they share responsibilities of the combat trains CP. Together, they set up and operate the trains CP, monitoring the battalion command net as well as the net control station (NCS) of the battalion A & L net. The S4's interaction with the S2 provides him with the required intelligence to forecast losses and subsequent resupply. He maintains close contact with the company XOs and/or ISGs to ensure timely and adequate supply. As the primary provider/coordinator of supplies, equipment, and services, the S4 must be fully integrated into the command and staff structure of the battalion.

PLANNING

Key planning imperatives for the S4 include the following:

- He must thoroughly understand the mission and the tactical concept of the operations
- He must anticipate requirements
- He must plan in detail
- He must continuously assess risks

The goal of the S4 planning process is to provide the most responsive logistical support to the tactical force. A good sustainment plan:

- Provides for mission accomplishment
- Is based on facts and valid assumptions
- Establishes relationships and fixes responsibilities at the unit/slice level
- Decentralizes authority

- Contains on-hand supply status of all units, particularly water, Classes III, IV (obstacle defense), IX, and V
- Is simple, flexible, and coordinated
- Is rehearsed with all TF CSS executioners
- Provides for continuous and adequate support
- Allows CSS functions to be performed as far forward as possible
- Supports by "push" packages rather than requisitions
- Provides for the positioning of areas and units to support the operations, to afford priority to the main effort, and to survive
- Addresses the control of roads, airlift, and other means of transportation
- Provides for the protection of CSS units, both personnel and materiel
- Has tailored, practical logistics reports that transmit key information with minimal confusion in the shortest time
- Estimates battle costs in terms of:
 - Consumption
 - Damage
 - Destruction

Supply planning. The most important areas of supply planning are those of "fueling" and "arming" the weapon systems of the supported force (fueling is a less critical issue in the light infantry battalion, although water resupply takes on greater significance due to limited transportation assets). Providing fuel to using units is critical for conducting successful combat operations. The battalion commander must set clear priorities for fueling. The S4 must plan consumption accurately, and economize whenever possible to assure adequate support. Slice assets should be integrated, such as engineer fueler and wrecker HEMTTs, water buffalos, and engineer/ADA cargo trucks. An efficient fuel system can only be established with good pre-battle planning. This requires in part, receiving accurate assessments of the unit's daily fuel requirements from the S4. Fuel requirements can be estimated from the following tables.

Raw Class III Data

	Fuel Capacity	Range
HMMWV (998)	25 Gallons	542 KM
HMMWV (996)	25 Gallons	483 KM
HMMWV (966)	25 Gallons	515 KM
BRADLEY	175 Gallons	483 KM
M113	95 Gallons	365 MILES
M1A1	504 Gallons	440-480 KM
SP VULCAN	95 Gallons	443 KM

Computing Bulk Fuel Requirements**For Tracks:**

Item Density x [(Idling Rate x Hours/Day) + (Cross Country Rate x Hours/Day) + (Secondary Road Rate x Hours/Day)]. This formula provides estimated bulk fuel requirements for the following vehicles:

	Idle	XCountry	Secondary Roads
Bradley	1.5	18.6	9.3
M113	1.0	8.6	8.9
M901	1.0	8.6	8.9
M1A1	10.8	56.6	44.64
SP Vulcan	1.0	5.2	13.0

For Wheels:

End Item Density x Consumption Rate x Hours/Day.

All HMMWVs have a consumption rate 0.497, or 1/2 gallon per hour

Note. Consumption rates will vary with mission (i.e., different missions require more or less idle and shutdown time). Adjust these rates as required.

Arming is the largest, most time-sensitive task of the logistic sustainment system. Pre-battle planning involving close coordination between the S4, S3, and S2 (who provides specific facts on expected size of the enemy and where contact will be made) is important. Critical to the planning process is the calculation of the ammunition requirements for the operation. This is normally computed by the S3. The S4, however, will probably have more time to devote to this task during the staff planning process. Key planning considerations include:

- How many weapons of what type are in the unit
- How long the element leader plans on firing on the enemy
 - Estimated number of targets?
- Estimated rates of fire, for how long
- What enemy is expected on the position
 - How many rounds will it take (on the average) to kill a target?
- At what estimated point in time the element will need a resupply
 - How much of what type?
- How and from where the unit will be resupplied
 - What route will be used to get to the unit?
 - Who will link up with the emergency Class V truck?
 - Has the truck driver been briefed on his expected mission?
 - Has the unit been briefed on these data?

Supply planning: Anti-tank weapon planning steps/considerations.

- Determine number of vehicles on objective
- Determine average number of rounds to destroy a vehicle
- Estimate the number of targets that will be fired at
- Multiply the number of targets times rounds required per kill to get an estimate of how many rounds will be needed
- The type of round selected by the gunners will have an impact on what needs to be resupplied

Supply planning: Automatic weapon planning steps/considerations.

- Estimate how long a position will need to be suppressed
- Determine how many aiming points are likely to be fired at
- Estimate rates of fire for weapon systems and how long they will be firing at that rate
- Multiply rounds per minute by number of minutes a weapon will be firing at each rate of fire. Take into account any barrel change times and expected enemy reinforcements/counterattacks

The S4 should be forecasting the battalion's ammunition requirements long before the tacticians finish their maneuver plan. The S4 can not wait until the OPORD to request Class V supplies for the task force. His estimates should be based on the IPB and the tentative plan. Once the sub-unit missions are completed, the S4 can tailor LOGPACs based on expected needs and unit requests. Emergency Class V supplies should be tailored for expected shortages from specific units.

Maintenance planning. Pre-battle planning of the forward positioning of maintenance assets, stocks of repair parts, and replacement equipment, and setting priorities for recovery and repair is critical for the tactical success of the mission. Key input from the S4 in this area is his estimate of the loss of Class VII weapons and vehicle systems. The BMO and maintenance support team are responsible for configuring Class IX supply packages. The BMO must be able to determine time guidelines for specified maintenance actions and recommend repair/recovery priorities based on the operational requirements of the mission.

Transportation and movement planning. Planning, controlling, and executing both unit movement and transportation operations requires detailed preparation. Effective pre-battle planning of transportation sustainment must occur to maximize the use of resources and overcome the complicating effects of terrain, weather, and enemy interdiction. These requirements are determined by identifying the type and amount of cargo, distance to be moved, and special movement requirements (e.g., time limitations, dimensions, etc.).

Planning for sustainment protection. The battalion commander may frequently have to take active steps to defend the unit's sustainment system when the threat exceeds the CSS capability or critically threatens disruption of sustainment support functions. Sustainment protection planning is the responsibility of all CSS unit commanders and staffs. Typically the HHC commander is responsible for the field trains CP, while the S1 and S4 are responsible for security measures at the combat trains CP. The battalion commander and his staff must plan a base defense system that accomplishes the rear operations tasks of securing the unit base, detecting any enemy infiltration attempts, delaying the attackers' progress, and finally destroying the enemy force. Normally, passive security is emphasized, but the unit must supplement this with active security measures. Guards should have anti-vehicle weapons systems (AT4, Dragon) available to them.

Planning for light/heavy operations. The light battalion S4 must be able to integrate the heavy unit's CSS slice into the battalion trains (the heavy unit should be OPCON to the light). He must ensure that the heavy unit knows the situation and that all the logistical actions conducted in the battalion's area of operations are coordinated. The light battalion S4 is responsible for ensuring that the CSS slice is adequate for the situation when the heavy unit is attached to the light battalion. He must also assume control of the CSS slice and coordinate the integrated CSS plan. This coordination is best conducted in the field trains between the two HHC commanders working under guidance from the S4.

Planning for heavy/light operations. The heavy battalion S4 must integrate the light unit's CSS slice into the battalion trains (the light unit will normally be attached). He may have to provide transportation assets to support the light force's logistical and movement requirements. The light unit will have different needs based on its PLL, most notably 60mm mortars, MK19s, and a higher volume of small arms parts. The light unit will also have a higher demand for water turnaround since available water reserves are limited to what the soldiers can carry in their canteens and five gallon cans.

Logistics estimate. In preparing the logistics estimate the S4 needs to consider the following:

- Status of supply Classes I, III, V, IX (heavy units especially) and water
- Operational status of key weapons systems at present and the expected status for line of departure/defend by time, and of MEDEVAC and other CSS vehicles
- Quantities of specified classes required to support the operation, especially those resources required to support habitually attached slice elements such as FIST, Eng, and ADA
- Assets available for transporting Class IV materials (particularly for light units)
- External support requirements
- Use of LOGPAC operations versus other techniques
- Anticipated equipment losses
- The advantages and shortcomings of specific COAs

Note. Coordination with the S2, S3, and S1 is critical.

Post planning considerations. Once the plan is finalized, the S4 should:

- Brief the combat trains CP personnel, to include both the S1 and S4 personnel
- Post a copy of the fire support overlay, maneuver and obstacle plan, and IPB in the combat trains CP
- Have available a copy of the battalion and brigade OPORDs, plus battalion, brigade, and adjacent unit SOIs
- Maintain a battle roster and a vehicle roster by bumper number and nomenclature plus special additions to the major end item (TOWs, Stinger racks, etc.)
- Insure that the combat trains CP has charts showing current task force maintenance, personnel, Classes III and V status down to platoon level. [These charts should mirror some of the charts kept at the TOC, specifically combat power charts]

The S4 must have a radio management plan for when he must assume TOC duties. He will initially need to maintain CSS nets as well as talk on brigade command, DS FA, and other nets as per battalion/brigade SOP.

PREPARATION

The S4 continues to monitor the current friendly and enemy situations and must be prepared to react as required. To accomplish this monitoring, he continues working with the primary and slice element staff officers or NCOs. During preparation he insures that the support platoon and maintenance platoon leaders are fully prepared to implement the battalion plan within the commander's intent. He conducts face to face coordination with unit ISGs, XOs, and separate platoon sergeants prior to the LRP time. He leads the CSS rehearsal.

EXECUTION

The S4, along with the S1, establishes and operates the combat trains CP. The combat trains maintain company equipment, fuel, ammunition, rations, Class IV barrier material, and water status and submit reports in accordance with the battalion/brigade TACSOP. The S4 monitors the support platoon and maintenance platoon as each executes mission support.

The combat trains CP acts as the maneuver headquarters for all task force CSS assets moving on the battlefield and should put out periodic tactical situation updates on the A & L net as required. When a unit announces sudden heavy losses on the command net, the combat trains CP alerts CSS elements (especially medical) so they are prepared to aid the unit as necessary. The combat trains CP is the battalion's alternate command post and must maintain the current situation and be prepared to assume control if the main CP is incapable of doing so. The combat trains CP should have copies of all reports the TOC uses to communicate with brigade.

CONCLUSION

The sustainment of the battalion is the primary responsibility of the S4. He must work closely with the command and staff structure. To ensure that the S4 section is appropriately utilized, the following information checklists are provided.

What the S4 needs to know from the battalion commander:

- Mission statement
- Concept of the operation
- Brigade and battalion commander's intent
- The enemy and friendly situation
- Priority of fires and effort
- Priority of maintenance support
- Priority of Classes III and V supply and priority for the tailoring of emergency resupply in the combat trains
- Any special ammunition requirements
- Mission essential tasks for each task force unit
- Maneuver control measures
- Time line for operation (phases)
- Future operations/next mission
- Obstacle plan/special needs for target reference point markers in the defense
- Chain of command, how the battalion commander can be located
- Rehearsal schedule
- Axis of advance and the enemy avenue(s) of approach
- Resupply time line/pause for recovery

What the battalion commander needs to know from the S4:

- Key CSS constraints
- Input during mission analysis and on all courses of action (COA), to include supportability of COAs (medical, maintenance, emergency resupply)
- Does the S4 understand the mission and tactical concept?
- Positioning of assets and units to support operations
- Organization of trains (echelon versus unit)
 - Is there a split aid station and maintenance element?
- Does plan allow CSS functions to be performed as far forward as possible?
 - Is the main effort weighted?
- Unit's fuel/ammunition/maintenance/Class IV barrier material requirements vs on hand and available
- Current status and expected line of departure/defend by time status
- Class VII weapon system loss estimate
- Transportation requirements/routes/capabilities
- Adequacy of command and control facilities for directing CSS activities
 - Is retransmission needed to talk to BSA/field trains?
- Night operation measures/considerations
- How are slice elements and other elements supported under task force control?
- How are the scouts and counterreconnaissance (in defense) supported?
- When the LOGPAC is coming forward so the effective task organization time does not interfere with resupply numbers (chow, headcount, etc.)

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Note. This section is based on the Combined Arms and Services Staff School Module (E410/1), Fundamentals of Tactical Sustainment. March 1989. Additional information was provided by FM 7-20, The Infantry Battalion. April 1992, Chapter 8, and Appendix B and D.

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NTC lessons Learned.

FIRE SUPPORT OFFICER

INTRODUCTION

The FSO's primary duty is to coordinate the battalion's fire support mission. His place of duty is where he best meets the commander's needs or objectives. It is critical that he sees the battlefield with the commander and understands the maneuver commander's intent. It helps him determine how available fire support assets can best be used in support of the commander's plan. He also assists in the training of the battalion's mortars.

Each time the commander and the S3 discuss current or future plans, concepts, or courses of action, the FSO participates. He must work closely with most of the primary and special staff officers.

ASSETS

Generally, the battalion's FA support comes from the 105-mm or 155-mm howitzer battalion in DS of the brigade. Other fires come from artillery units that reinforce the DS battalion and by units in GS of the division. The mortar platoon provides the most responsive indirect fire available.

Each maneuver commander is provided or allocated an indirect fire system to influence his portion of the battlefield. The light company commander has an organic 60mm mortar section; the battalion commander has an organic 81mm mortar platoon. When the maneuver brigade is committed to battle, the brigade commander generally will be allocated a direct support artillery battalion. Other assets that may be provided to the maneuver force include Army attack helicopters, TACAIR support, naval gunfire, and IEW. Air defense and engineer assets may also become important components of the fire support system.

PRIMARY FSO DUTIES

Under the maneuver commander's guidance the FSO integrates and synchronizes the firepower of field artillery (FA), mortars, close air support (CAS), and, when available, naval gunfire, with the maneuver of combat units.

Primary FSO Duties

- Works as a member of the targeting team (FSO/Commander/S3/S2/ALO/Mortar platoon leader) to develop the observation plan (part of the R & S plan) and the fire support execution matrix
- Determines/synchronizes fire support mission requirements and means available, (e.g., USAF, ADA, mortar platoon, engineer, and direct support field artillery) and recommends priorities of fires and allocation of fire support
- Assesses the enemy situation and recommends when to attack what targets with what munitions for how long to achieve the commander's desired effect
- Determines what fire support coordinating measures facilitate the commander's scheme of maneuver considering the impact of anticipated changes
- Directs the attack of targets and coordinates fire support in the battalion's area of operation based upon the commander's high payoff target list and attack guidance
- Keeps his higher and lower fire support elements (FSE) informed of the battalion's situation; and reports information to the commander and his staff, especially enemy and friendly fire support matters
- Establishes, operates, displaces, and supervises the target acquisition effort of the FOs and FSE with guidance from the commander, the S3, and the FA commander
- Conducts target analysis, prepares, executes, and monitors the battalion's fire support plan
- Coordinates and monitors ammunition requests and resupply actions with the XO and S4

STAFF COORDINATION

The FSO is in charge of the FSE. The FSE should be collocated with the tactical operations center (TOC) so that the FSO can easily coordinate with the staff. The FSO will coordinate with several technical advisors, collocated in the FSE and TOC in the planning and coordination of the battalion's fire support. Representatives may include the following:

- **S3 Air.** Receives, coordinates, and processes all close air requests. He advises the Air Force tactical air control party of the ground tactical situation and other important Army information
- **Air liaison officer (ALO).** Provides expertise on and monitors requests for close air support (CAS) and battlefield air interdiction. He keeps the FSO informed of the current status of available air support
- **Air defense artillery (ADA) representative.** Provides information on the status of air defense artillery and coordinates airspace control with the FSO
- **Supporting arms liaison team officer (SALTO).** Advises, monitors, and approves naval gunfire and Naval/Marine air requests
- **Engineer officer.** Coordinates the emplacement of mines and obstacles
- **Mortar officer.** Provides technical expertise on matters related to indirect fire
- **S4.** Provides information on how much Class V is available for special missions, (e.g., WP, Illumination, HE)

PLANNING

It is very important that the FSO shares the commander's view of the battlefield. During planning, he will want to do the following:

- Compare known terrain features with the commander's fire plan and inspect probable friendly unit positions
- Find his forward observers (FOs) and fire support teams (FISTs) and ensure they know how to coordinate with other agencies
- Plan with the engineer for field artillery delivered FASCAM minefields

To function effectively the FSO should use:

- Fire support situation map
- Fire support status chart
- Secure radios to communicate with his DS battalion, and higher/lower FSEs/FISTs
- A digital communications device such as a variable format message entry device (VFMED) or a battlefield commander's terminal (BCT) linked to the FA battalion TACFIRE/LTACFIRE in the DS battalion fire direction center. A FIST digital message device (DMD) also can be used to establish a digital link between the FSO and DS battalion TACFIRE
- Charts displaying the attack guidance matrix, high payoff targets, and target selection standards

The key to effective fire support integration is thorough and continuous inclusion of the FSO in the planning process and a vigorous execution of the plan. There are two major considerations that must be included in the commander's thought process when planning and coordinating fire support. **First, integration of fire support will not be optimum unless the commander becomes personally involved.** His active support is required to ensure the right staff members coordinate with the FSO and the FSO coordinates with them. **Second, fire support agencies require more planning time than maneuver units.** Responsive fires require that fire support systems be in the right place at the right time.

Field artillery takes time to reposition. Preplanned CAS requires at least 30 hours to effect coordination and to prepare the proper ammunition and aircraft combination. Also, **staff coordination, particularly with the S2, involves detailed planning to generate the targeting information required to support the commander's plan.**

The FSO needs to be included upon receipt of the mission or immediately following; anything less will greatly decrease the battalion's survivability. The FSO needs to be concerned with the following:

- Understanding the commander's guidance, his intent, and courses of action [The commander's intent answers When, Where, What (timing, desired effects, duration), Why, and How (to supplement not interfere)]
- Preliminary guidance on desired effects of high-payoff conventional targets
- Areas or points of the operation in which certain risks may be acceptable
- Guidance on command and control arrangement and reserve force commitment
- Guidance and assumptions on critical events to be considered

Based upon information gathered above, the FSO prepares his staff estimate at which time he also analyzes each course of action from a fire support perspective. Before analyzing each COA the FSO should plot higher's targets; look at doctrinal targeting tasks by mission type; and check the S2's terrain analysis. The FSO will recommend a course of action which can be best supported by fire support assets. Once all the staff inputs have been considered and a course of action has been chosen, the following actions are taken:

- The staff and FSO refine the IPB and target value analysis (TVA) processes to include refined named areas of interest (NAIs), decision points, and high-payoff targets
- The FSO and S2 integrate and refine the observation/observer plan
- The FSO develops the fire support tasks, responsibilities, and requirements
- The FSO writes the fires paragraph and fire support annex and/or fire support execution matrix
- The high-payoff target matrix and attack guidance matrix are developed. These matrices provide the commander with a tool by which he prioritizes the processing of targets from targeting to engagement. They will not always mirror the matrices provided by higher echelons
- The FSO develops the target selection standards

Mission Planning Considerations

When planning for the mission the commander must consider the type of mission and how it impacts on the positioning of his fire support assets. The FSO, S3, and mortar platoon leader should plan and coordinate both FA and mortar positions. The fire support elements need maneuver room to keep up with the battalion. These elements also require more time to react to the changing situations.

Offensive operations. In offensive operations, field artillery and mortars are positioned well forward (2/3 of maximum range) to exploit range, to facilitate liaison and communications, and to avoid early displacement. FA battalions are also located to avoid interference with other units.

Defensive operations. In the defense, field artillery is positioned in depth and to the flanks of the enemy anticipated axis of advance to ensure continuous fire support throughout the battle area. Some assets are positioned well forward to provide long range interdiction fires.

Displacement considerations. Dependent on the tactical situation and terrain, field artillery units move much like the maneuver units. In any case movement must be coordinated to provide continuous fire support.

Fire Support Coordination Measures

The FSO is responsible for the appropriate use of fire support coordination measures to facilitate rapid coordination and safeguards for friendly troops. There are two categories of fire support measures, permissive and restrictive.

Permissive coordination measures. A coordinated fire line (CFL) is a line beyond which mortars, field artillery, and naval gunfire may deliver surface-to-surface fires in the establishing headquarter's sector without coordination. Normally, the CFL is established at brigade or independent battalion or higher headquarters. A fire support coordination line (FSCL) is a line beyond which all fire support means may attack targets without coordination. The FSCL is usually established by corps or an independent division. A free-fire area (FFA) is a designated area into which any fire support agency may deliver fires without coordination. Normally, the free fire area may be established at battalion or higher.

Restrictive coordination measures. A restrictive fire line (RFL) is a line established between converging friendly forces that prohibits fires or effects from fires across the line without coordination with the affected force. The RFL is established by the commander of the converging forces. A restrictive fire area (RFA) is a designated area where specific restraints have been imposed and fires can not exceed those restraints without approval from the establishing force headquarters. A RFA is established by battalion or an independent company or higher headquarters. A no-fire area (NFA) is an area which no fires or effects of fires are allowed. Two exceptions are (1) when establishing headquarters approves fires temporarily within the NFA on a mission basis, and (2) when the enemy force within the NFA engages a friendly force, the commander may engage the enemy to defend his force.

Airspace coordination measures. Airspace coordination measures include the informal airspace coordination area (ACA) which is used for immediate air strikes. It can be time-distance separation or a terrain feature separation of the attacking air and surface fires. Normally, the informal ACA is established at task force or higher level. A formal airspace coordination area is a three-dimensional block of airspace in which friendly aircraft can fly without fear of being hit by friendly fire. It is established by brigade or higher headquarters.

Unit boundaries. Unit boundaries are both permissive and restrictive fire support coordination measures. Company boundaries allow a company commander to engage targets within his boundaries without coordination. Boundaries require outside agencies (e.g., battalion mortars, battalion FSE, other companies) to coordinate fires with the company commander (normally through his company fire support officer). Proper use of boundaries can normally preclude the FSO from having to establish unique fire support coordination measures.

PREPARATION

The FSO, working with the S2, continues to update the fire support plan. He monitors the activities within the FSE and insures that all plans are understood and ready for execution.

EXECUTION

Fire Control

The FSO has direct access to the TACFIRE main fire control computer through a VFMED or he can use a FIST DMD. The TACFIRE system provides greater accuracy and reduced reaction time and makes better use of target information. However, it is critical that the FSO maintain voice override, since TACFIRE is primarily a planning tool. TACFIRE is influenced by the commander's guidance. The commander should, with the FSO, determine the attack criteria for certain targets. He can tell the artillery when, what, how much, and priority.

TACFIRE Capabilities

- Selects the best available fire support means
- Calculates the required ammunition expenditures to accomplish the desired effect
- Accepts and passes critical target intelligence from brigade, the DS artillery battalion, adjacent brigades, Division Artillery, and Division FSE
- Field artillery intelligence sources include:
 - COLTs, FISTs, and FOs
 - Weapons-locating radars (AN/TPQ-36, and -37)
 - Unmanned aerial vehicles
 - Other artillery units
 - Higher headquarters sources (area security information center, nationals, and satellites)

CONCLUSION

The commander, quite literally, calls the shots. He should make sure that his intent is known to the FSO during the planning phase of the operation. The commander must use all of the people and equipment at his control to insure that he gets the most from his fire support system. Advanced planning is important. Once the enemy is stopped, the commander must consider his next actions. He should be frugal in planning and not create an unmanageable number of targets.

Communication is the key to success between the fire planner and the maneuver commander. The process must be continual and the intent of both parties understood. To assist in this process, the following information checklists are provided. Some of the questions will require input from the commander, others will require special staff input, while many will require a coordinated staff solution.

What the FSO needs to know from the battalion commander:

- Mission
- Commander's concept of operation
- Commander's intent
- The enemy situation
- The friendly situation
- Purpose of fires
- High payoff targets
- Priority of fires
- The most critical indirect fire targets by priority
- What the commander wants the mortars to do for the unit
- Any special fires (prep, FPF, illumination)
- Fire coordination signals
- Any special munitions (FASCAM, smoke)
- Commander's maneuver control measures
- Time available
- Obstacle plan
- Chain of command
- How the commander can be located
- Rehearsal time and location
- Axis of advance
- Enemy avenue(s) of approach
- Ammunition resupply procedures

What the battalion commander needs to know from the FSO:

- His targeting capabilities
- All fire support assets available
- Effect/defeat criteria for TACFIRE
- Ability of fire support assets to meet defeat criteria as stated in the commander's attack guidance
- His evaluation of high payoff targets
- Are fire control measures synchronized with maneuver control measures?
- Are ammunition prestocks available?
- Is fire support coordinated with the obstacle plan?
- Who will position and control fire support assets?
- How will he provide continuous support to the maneuver force

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ENGINEER

INTRODUCTION

The **primary mission** of the combat engineer unit is to increase the combat effectiveness of the maneuver battalion. This is accomplished by increasing the mobility of friendly forces, by impeding mobility of enemy forces, and by providing the friendly force increased survivability. The secondary mission of the engineer is to fight as infantry when so required by higher level.

ASSETS

The light battalion may be allocated an engineer platoon or company by the brigade. Other engineer assets, such as FASCAM, may be provided as needed. The engineer platoon/company is used mainly to emplace and breach obstacles and to help with the battalion reconnaissance effort.

Engineer platoons in the light division have organic mine detectors, demolition kits, carpenter kits, and pioneer tool kit. Other engineer equipment (e.g., armored combat earthmovers (ACEs), small emplacement excavators (SEEs)) can be requested from the supporting engineer battalion.

The heavy battalion may be allocated an engineer company under the Engineer Restructuring Initiative (ERI) in which an engineer brigade will be organic to the heavy division and an engineer battalion in direct support to each maneuver brigade. The ERI engineer company has 2 sapper platoons of 3 squads each mounted in M113 armored personnel carriers and 1 ACE per platoon. The assault and barrier platoons of the ERI company have 5 ACEs, 2 combat engineer vehicles, 4 AVLBs, 4 mine-clearing line charges (MICLICs), and 2 ground-emplaced mine scattering systems (GEMSSs) or Volcanoes. ERI bulldozer-equipped engineer companies have 4 bulldozers in lieu of 7 ACEs.

ENGINEER CAPABILITIES

Heavy Engineer Characteristics

- Heavy engineer companies are equipment heavy and manpower light, highly mobile, and protected when mounted. They are most effective operating as platoons and are capable of self-tactical sustainment with only minimal support from the parent or supported unit. They possess organic bridging assets (AVLBs) and can provide scatterable minefield capability [GEMSS, Volcano/Flipper, (ADAM/RAAMS - from 155mm howitzer)].
Note. The effective employment of FASCAM assets requires careful coordination among the engineer, FSO, S3, and S2.

The heavy engineer focus is on in-depth tactical obstacles supporting a heavy force or combined EAs in open or mixed terrain. They possess mobile recon capability and can recon numerous NAIs. They have rapid and survivable breaching capability, possessing both mechanical and explosive breaching assets. The bulk of the heavy engineer equipment is required for heavy force survivability.

- Heavy engineer companies provide rapid linear tactical obstacle emplacement (row and scatterable minefields, wire), some obstacle material haul, mobility support, and survivability support. They provide responsive flexibility to support rapid shifts in engineer missions and the equipment necessary to maintain the mobility of the heavy force.
- Heavy engineer continuous capability is limited to the MICLIC which is only effective against single impulse mines and manual breaching.

Light Engineer Characteristics

- Light engineer companies are both equipment and manpower light (LT Division: 2 platoons/64 men; ABN/AASLT Division: 3 platoons/96 men). They lack haul assets, have no organic bridging assets, possess limited communications capability, and are foot or wheel mobile. The light engineer companies have organic scatterable minefield capability (Volcano, ADAMS, RAAMS) They are capable of decentralized offensive operations of 48 hours or less. Reconnaissance missions are dismounted, resulting in fewer NAIs in detail. The light engineers are capable of assault breaching or limited in-stride breaching, but not both. Light force survivability requirements are provided by the light equipment slice or heavy engineer equipment slice for the light battalion.
- Light engineer companies provide countermobility/survivability through point obstacle emplacement, preparing disrupting obstacles well forward, and strongpoint preparation.

The engineer battalion can provide a company in DS of each maneuver brigade, but there are not enough platoons within each company to provide a platoon DS to each maneuver battalion. The **normal method of support is on an area basis**. The effectiveness of engineer support is greatly reduced if these assets are piecemealed out.

PRIMARY ENGINEER SUPPORT DUTIES

The Engineer staff officer provides expertise/input in the following areas:

Mobility

Offensive Focus

- MSR/other route clearance and maintenance
- Combined arms breaching
- Lane handover
- Assistance in the forward passage of follow-on forces
- Clearing and gap crossing

Defensive Focus

- Terrain considerations
- MSR/lane closure
- Force repositioning/counterattacks
- Combat trails

Countermobility

Offensive Focus

- Emplacement of situational/tactical obstacles
- Blocking enemy avenues of approach into the battalion's flanks and rear
- Development of plans for the rapid transitioning from offensive operations to a hasty defense

Defensive Focus

- Obstacle belt (battalion)/group (brigade) locations and functions
- Situational obstacle repair teams
- Direct/indirect fire integration to obstacles, priorities, and obstacle resourcing
- Priorities and use of engineer equipment

Survivability

Offensive Focus

- Continued support of protective positions
- Development of fighting/protective positions to support the transitioning to a hasty defense

Defensive Focus

- Fortifications (number and type)
- Protective obstacles, anti-tank ditches, wire, anti-personnel mines, camouflage, strongpoints, and deception
- Priorities and use of engineer equipment
- Survivability positions

Additional Engineer Battlefield Support Duties

Although not directly related to combat activity, engineers further contribute to the battalion's success on the battlefield by performing various sustainment engineering tasks. Sustainment engineering includes those tasks which increase the mobility, survivability and sustainability of tactical and logistical units to the rear of the FLOT, e.g., construction and repair of lines of communication, logistics facilities support, area damage control, and construction material production. Doctrinally, this is done by corps units assigned to support a division.

Engineer support duties and responsibilities during offensive operations can be divided into three phases. During the **planning phase**, the engineer does an engineer estimate followed by an engineer plan. Engineer planning involves the analysis of terrain, friendly and enemy characteristics, and capabilities. During the **reconnaissance phase** of the operation, the engineer augments scouts or patrols to collect critical information about obstacles, the breaching of specific obstacles, or enemy engineers. During the **offensive operation** the engineers will be involved with the task force in one or more of the following: in-stride breaching, deliberate breaching, battlefield isolation, and flank protection.

Engineer support duties and responsibilities during defensive operations can also be divided into three phases: **planning, battlefield**

preparation (i.e., designing tactical obstacles and preparing survivability positions, while allowing for any mobility requirements), and **contingency battlefield operations** such as obstacle activation, emplacing obstacle reserves, providing support for counterattack forces, preparing supplemental positions, and repairing, restoring or improving existing designs.

STAFF COORDINATION

The task force engineer works closely with the S2 during the IPB process and development of the situational template. He contributes to the R & S plan to help confirm or deny the enemy situation by providing an analysis of the terrain and friendly/threat capabilities, enemy engineer options, and anticipated priority of efforts. He also works with the S3, S4, and FSO to develop the engineer plan, to provide resources to support the plan, and to coordinate fires with obstacles. The engineer works closely with the battalion commander to address the following: purpose of the obstacles, priorities of mobility, countermobility, and survivability during offensive, defensive and other tactical operations, work priorities, emplacement guidance for scatterable mines, and restrictions on obstacle use.

PLANNING

A common SOP or a thorough understanding of each unit's SOP (to include all combined arms units) is essential for synchronization. An exchange of liaison officers is also critical to the synchronization process. The commander must be aware of the characteristics of the supporting engineer element.

The engineer must consider the **maneuver commander's intent** and the **type of offensive operation** being conducted in developing his plan. A **highly mobile engineer force**, well forward and integrated into maneuver formations is critical to maintaining the momentum of the attack. Specific arrangements are necessary to hand over obstacles from forward breaching

units to engineers for lane improvement and obstacle clearance.

Sustainment engineering requirements will increase during offensive operations since LOCs will lengthen. An on-call **rapid mining and rapid obstacle emplacement capability** is essential for flank security. The amount and type of **engineer equipment** needed in the offense must be considered. At brigade and task force levels, **engineers must be configured to emplace obstacles rapidly** to protect attacking forces from enemy counterattacks once the objective is seized. Long term planning (division level and higher) for **transitioning to the defense** allows time for class IV and V to be sent forward .

As a member of the combined arms staff, the engineer officer participates in the following activities during operation planning:

IPB Preparation

- Combined obstacle overlay
- Situational template
- Event template
- Decision support template
- R & S plan
- PIRs
- Intelligence collection and analysis
- Continuous METT-T update

Scheme of Maneuver

- Direct fire planning
- Sector or battle position planning
- Obstacle planning
- Breach planning
- High value target recommendations
- Coordinate class IV
- Maintain obstacle emplacement records

Note. The engineer officer or the battalion XO should identify an LNO who will coordinate/control the use of assets to ensure the timeline is adhered to, and assets do not remain idle

Fire Support

- ADAMS/RAAMS input
- Forwards ADAMS/RAAMS target worksheets through engineer channels to division
- Fire support target recommendations
- Obscuration

Planning for light/heavy unit operations. Heavy forces defend from prepared firing positions. If engineer assets are unavailable, the concept and the terrain allocation must allow for protection through maneuver or for the use of hide positions. A common obstacle plan must fully integrate the requirements for both forces. The S2's terrain analysis must address the requirements of both forces to allow the S3/engineer representative to develop an effective plan. Finally, range disparities between weapons should be considered when preparing obstacle plans.

Engineer estimate. The engineer estimate is an extension of the command estimate. It is performed concurrently with other staff estimates and refined in accordance with situational updates. **The engineer estimate has three distinct purposes:**

- To ensure early integration of mobility/countermobility/survivability operations
- To focus engineer coordination with the commander and staff
- To ensure timely development of plans, orders, and annexes

The successful development of the engineer plan is dependent on:

- Thorough understanding of the commander's intent
- Early identification of key engineer tasks
- Thorough understanding of assigned engineer assets and how to use them (i.e., well thought out execution matrix that considers survivability)
- Thorough understanding of the terrain through either ground or aerial reconnaissance
- A sound organizational strategy allowing for rapid transition to offensive missions

PREPARATION

The actions of the engineer during the preparation phase of the operation are critical to the battalion's success. During this time, preparation activities focus on improving the battalion's mobility, developing countermobility measures, and improving the unit's survivability. The engineer element also supports the operation by providing intelligence to the commander through the S2 by updating METT-T.

EXECUTION

During the execution the engineer supports the operation by monitoring the status of all defensive obstacles and the elimination/breaching of enemy obstacles. His elements will continue to update METT-T and provide intelligence, and are prepared to fight as infantry as required.

CONCLUSION

Engineers provide the commander with the extra technical skills and equipment needed to execute the mobility, countermobility, and survivability requirements of the battalion. To ensure this slice element is appropriately utilized, the following information checklists are provided.

What the engineer needs to know from the battalion commander:

- Mission
- Concept of operation
- Commander's intent
- The enemy situation
- The friendly situation
- Any special fires (prep, FPF, illum)
- Any special munitions (FASCAM, smoke)
- Maneuver control measures
- Time available
- Chain of command
- How the commander can be located
- Rehearsal time and location
- Axis of advance
- Enemy avenue(s) of approach
- Ammunition resupply procedures
- Location where the commander wants to kill the enemy
(targeted areas of interest, EA)
- Targeted elements (and intent for situational obstacles)
- Priorities for employing mobility, countermobility, and survivability measures
- Obstacle intent, i.e., to turn, fix, block, or disrupt
- Commander's plan for controlling blade teams

What the battalion commander needs to know from the engineer:

- Does he understand all the above elements?

The following engineer specific items:

- Engineer estimate
- Barrier material requirements
- Mine laying capabilities
- Blade hours available
- Target turnover criteria
- What problems he anticipates in implementing the battalion commander's plan
- Has he coordinated with the FSO and S3 to insure that obstacles are covered by fire?
- Has he coordinated his terrain analysis with the S2 and S3?
- What equipment does he have direct access to?
- Plan for use of assets (equipment, Class IV, platoons)
- Plan for tracking engineer work (obstacle emplacement, survivability positions)
- Specified and implied tasks
- Input to and assessment of COAs
- Enemy employment of engineer assets
- Engineer participation in rehearsals (particularly breaching)

Note. In the TOC, the engineer should have the following information posted or on templates:

- Dozer blades available
- Mines - Class V
- Barrier material - Class IV
- Situational obstacle information
- Demolitions
- Mine detectors, etc.
- Supply points, etc.
- IPB NAI/MSR/route clearance operations
- Planned, expected, % complete obstacles
- Areas of responsibilities/task organization

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AIR DEFENSE ARTILLERY

INTRODUCTION

The objective of air defense is to limit the effectiveness of enemy offensive air efforts to a level that permits freedom of action to all friendly forces. An infantry battalion has no organic, dedicated, air defense weapons. It may be supported, however, by a Stinger section, a Vulcan platoon, or both from the divisional ADA battalion.

The division air defense system is capable of limited protection of maneuver and critical CS and CSS forces. It provides the division commander the flexibility he requires to maneuver on the battlefield. The air defense system identifies and engages enemy aircraft before friendly forces can be attacked. The system has the capability to engage targets simultaneously to support division close, deep (only with Patriot or Hawk), and rear operations. It interfaces with the informal A2C2 element in the main CP to ensure rapid transmission of data, to coordinate fires, and to protect friendly airspace.

ASSETS

ADA support provided to the battalion will vary based on the guidance provided by the battery commander (brigade ADA officer) to the brigade commander. Battalions are most often supported by air defense weapon systems such as the Stinger, Vulcan or Avenger. A stinger section includes a headquarters element which is composed of a section chief, and three to five Stinger crews (two men per crew). Each self-propelled Vulcan carries a three-man crew and two Stingers. Towed Vulcans, which normally support light battalions, also have a three-man crew. [Note: heavy divisions will field Bradley Stinger Fighting Vehicles (BSFV) and Avengers will replace towed Vulcans in light divisions].

The Stinger section sergeant is located at the TOC to plan and control ADA integration and early warning (if the battalion has the Stinger attached). He immediately analyzes the changing air defense posture, and recommends how to deal with the threat. If a platoon of Vulcans is supporting the battalion, the ADA platoon leader coordinates use and

employment of all supporting air defense assets. He generally stays with his platoon.

PRIMARY ADA OFFICER DUTIES

- Advises the commander and the staff on all matters related to the employment of ADA units
- Determines requirements for ADA units and recommends their allocation to subordinate units and the command relationships between the subordinate units and supporting ADA units
- Advises the commander and the staff on active and passive air defense measures
- Passes air attack early warning to supported unit
- Prepares the ADA portion of plans and orders to provide continuous coverage
- Writes the AD annex to order
- Prepares the ADA portion of the TAC SOP
- Prepares the Air IPB with the task force S2
- Coordinates, with the S2, the integration of ADA operations into the overall intelligence system
- Ensures coordination of Army ADA operations within the battalion and with higher commands
- Coordinates for security and logistical support of his own element
Note. Usually the ADA element is integrated into the brigade/battalion. In DS, logistical support comes from the supported unit (except for ADA specific)
- Plans and coordinates the use of airspace in conjunction with the S3 Air
- Monitors the readiness status of ADA units and advises the commander and appropriate staff elements
- Advises on the impact of EW on ADA operations in coordination with other staff elements and assists in the preparation of the EW annex to operation plans and orders

- Participates in the development or review of joint ADA rules and procedures pertinent to the battalion
 - All arms for air defense.** Advises task force on methods of self defense against air defense
 - Rules of engagement.** Advises task force on rules of engagement for enemy air
 - Hostile criteria.** Advises task force on what constitutes a hostile act by threat aircraft
- Monitors ADA OPSEC measures to ensure compliance with directed procedures
- Coordinates fire support to protect air defense teams
- Checks with air assets to ensure IFF codes are coordinated

STAFF COORDINATION

The ADA platoon/section leader must work closely with the S3 to determine ADA asset allocation, positioning, and missions in accordance with the priorities established by the commander. Air defense must be continually synchronized with aviation operations to preclude fratricide of friendly aviation assets. Complete integration of all ADA units into the combined arms plan is critical.

PLANNING

ADA Planning Considerations for Offensive Operations

- Size of the ADA element
- ADA gun and missile system composition
- Night combat limitations/advantages
- Location of the main battle
- Rapidly changing nature of battlefield situations
- Continuous coverage
- Fire support
- Supported commander's priorities

ADA Planning Considerations for Defensive Operations

- Enemy's main avenue of approach (ground and air)
- Static defense (amount of terrain to be retained, number of fixed positions requiring protection)
- Dynamic defense (size of enemy, maneuver, and fire assets available)
- Fire support
- Supported commander's priorities

ADA Planning Considerations for Retrograde Operations

- Location of reserve elements, command posts, FARPs, and maneuver choke points
- Deception and security measures
- Visibility conditions
- Nature of the tactical situation
- Availability of air defense assets
- Fire support
- Supported commander's priorities

Establishing Air Defense Priorities

In order to optimize the limited number of existing ADA resources available, the commander must work in close coordination with the ADA officer in establishing clear priorities for each of the battalion's assets. This is accomplished by systematically evaluating each asset for criticality, vulnerability, recuperability, and threat.

Criticality. Criticality is the degree to which the asset is essential to mission accomplishment.

Vulnerability. Vulnerability is the degree to which an asset is susceptible to attack or to damage if attacked. Consideration should be given to the asset's hardness, its specific mission in the overall operation, the degree to which the asset can disperse or displace to another position, the degree to which it can provide its own air defense, and the amount of protection afforded by passive air defense measures.

Recuperability. Recuperability is the degree to which the asset can recover from inflicted damage in terms of time, equipment, and available manpower to again perform its mission.

Threat. The probability of an asset being targeted for attack by enemy air must be assessed if economical allocation of ADA resources is to be achieved. Targeting information provided by intelligence estimates, past enemy attack methods, and enemy doctrine are all useful in determining which assets require active air defense protection.

Additional Considerations for Establishing ADA Priorities

The criticality, vulnerability, recuperability, and threat of each asset must be weighed against its total contribution to the battle. The commander must carefully consider the tradeoffs for protecting various assets across the expanded scope of battlefield operations including close and rear operations.

ADA Employment Principles

The balanced application of the following principles (mass, mix, mobility, and integration) to fit the needs of the tactical situation can

enhance the effectiveness of the battalion's air defense and increase the survivability of ADA.

- ADA combat power must be **massed** to successfully defend the asset against attack
- ADA systems (gun and missile) must be properly **mixed** so that any limitations in one system are offset by the capabilities of another system
- ADA units tasked with providing air defense to maneuver units should possess **mobility** equal to that of the supported element
- ADA weapons must be fully **integrated** into the commander's scheme of maneuver

ADA Employment Guidelines

In conjunction with the principles mentioned above, the commander should try to incorporate as many of the following guidelines (balanced fires, weighted coverage, mutual support, overlapping fires, early engagement, and defense in depth) in his air defense plan as the tactical situation will allow.

- ADA weapons should be positioned to deliver **balanced fires** in all directions
- ADA weapon fires should be **weighted** toward known enemy locations, unprotected unit boundaries, or enemy attack corridors or routes
- Individual fire units should be **mutually supported**
- ADA weapons should be positioned to provide **overlapping fires**
- ADA weapons should be positioned so that hostile aircraft are **engaged early**, prior to expected ordnance release
- ADA weapons should be positioned to provide **defense in depth** so that threat aircraft encounter an ever-increasing volume of fire as they approach a specific defended asset

PREPARATION

The ADA platoon/section leader monitors the readiness status of ADA units and confirms that ADA OPSEC measures are being complied IAW directed procedures. He ensures ADA operations within the battalion are coordinated with higher commands.

EXECUTION

The ADA platoon/section leader carefully monitors the status of aviation operations. Based on intelligence updates provided by the S2 and requirements from the S3, he makes appropriate adjustments in the allocation and positioning of ADA assets.

COMMAND/SUPPORT RELATIONSHIP

Doctrinally, the relationships between air defense units and other units may be either command or support and are directed by the G3 in coordination with the division air defense artillery battalion commander. The ADA elements supporting the battalion can be kept under or attached to companies. Centralized control is preferred since it allows for better coordination of ADA support. Although the Vulcan platoon is employed under platoon control, Stingers can be employed by team. The commander will determine appropriate control measures for the tactical environment.

In offensive operations, the battalion air defense priority goes to the companies. For defensive operations, the ADA priority shifts to battalion logistical, fire support, and command and control assets.

ADA CAPABILITIES

Battalions are most often supported by air defense weapon systems such as the Stinger and Vulcan (the Stinger Fighting Vehicle, and Avenger in the near future). The Stinger counters high-performance, low altitude ground attack aircraft, helicopters, and observation and transport aircraft. Each two-man Stinger crew has an M998 with six Stinger weapons in its basic load (or will be mounted in a Stinger Fighting Vehicle with six missiles in its basic load). The Stinger's planning range is 5,000 meters. The Vulcan system is employed in forward area air defense to counter low-altitude aircraft. Since its aerial range is only 1,200 meters, the Vulcan is normally employed with Stingers.

CONCLUSION

The infantry battalion's main air defense asset is a passive measure: remaining undetected. If support is provided from the divisional ADA battalion, the following information checklists will ensure all key ADA related issues are addressed.

What the ADA officer needs to know from the battalion commander:

- Commander's intent and scheme of maneuver
- Nature and scope of assigned tactical missions
- Air defense priorities
- Guidelines for selecting fire positions
- Can ADA elements with GS mission provide incidental coverage over the battalion area?
- Positions of friendly forces in proximity of air defense teams
- Aviation assets

What the battalion commander needs to know from the ADA officer:

- Recommended air defense priorities
- Number, type, and positioning of ADA weapons defending each asset
- ADA task organization
- Terrain and weather factors impacting on air defense plan
- Threat characteristics and tactics impacting on air defense plan
- Number of types of ADA weapons available to each defense
- Weapon system requirements, limitations, characteristics, impacting on air defense plan
- Specified and implied tasks
- Input to and assessment of COAs
- An effective early warning plan
- Weapons control status and air defense warning status
- OPSEC plan for ADA assets

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SIGNAL

INTRODUCTION

The BSO advises the commander/S3 on all communications and electronics matters including positioning command and control elements. He is the point of contact for the issue of SOI during operations, as well as for communications troubleshooting. He is also responsible for providing retransmission capabilities to the battalion.

The signal officer is the communications section/platoon leader responsible for the welfare of the section's/platoon's members and for planning and troubleshooting after operators have conducted troubleshooting procedures for communications within and external to the battalion. The XO exercises primary staff supervision over the BSO (but must keep the S3 informed of the commander's requirements) while the Headquarters and Headquarters Company (HHC) commander has command responsibility.

ASSETS

The communications section/platoon represents a ready source of manpower for the HHC commander. It should not, however, be considered a ready source of manpower to the HHC commander over and above minimum taskings. The battalion commander must make it clear that operational control of the section/platoon belongs to the signal officer. The signal officer coordinates and exercises technical supervision over the employment of communication systems and equipment, training activities of battalion communications personnel, and battalion communication certification for all officers and NCOs. He normally works out of the TOC under control of the S3/XO.

PRIMARY SIGNAL OFFICER DUTIES

- Keeps commander and his staff informed on all signal matters
 - Use of secure equipment
 - SOIs
 - Controlling key lists
 - TACSAT single channel and AM to "FM use"
 - Retransmission assets
 - System allocations (identify communication resources/means and prioritize usage)
 - FM radio use
 - Equipment maintenance
 - Training on all communications and electronic systems
 - Automation integration
- Integrates the communication support plan into the order process
- Exercises technical supervision over signal activities to ensure safe operation
- Ensures that communication resources and support are adequate to meet mission requirements. This may require combining/reconfiguring equipment, committing spares, using field expedients, and/or requesting assistance from higher headquarters

STAFF COORDINATION

The S3 has staff supervision over the communications activities of the unit in combat. However, the signal officer is directly responsible to the commander for communications. This responsibility does not necessarily go through the S3. The commander may desire to work strictly with the S3 or he may prefer to deal directly with the signal officer. If the latter is the case, then the signal officer must keep the S3 informed of the commander's communication requirements and his projected actions.

The signal officer must have a close working relationship with the entire battalion staff, especially the S3. This relationship must include the signal officer at brigade and subordinate signal personnel.

PLANNING

The signal officer provides expertise in the following areas during the planning phase:

- Plans all aspects of the unit communications system
- Plans the integration of the unit communications system into the systems of higher, lower, and adjacent headquarters
- Prepares and writes the signal annex of unit orders and plans
- Advises the commander on the ECCM aspects of EW and develops anti-jamming procedures for MIJI reports
- Plans and coordinates for continuous/extended (retrans) communications among and within brigade and battalion command posts
- Ensures selected areas afford the most in communications potential and the least in potential enemy EW interference
- Plans location of command and control node in coordination with the HHC commander

PREPARATION

During this phase, all communications equipment is inspected and tested for completeness and proper functioning. Any failure detected during this time must be corrected prior to continuing. All security measures are reviewed and rehearsed. Remote antennas, radios, and relays are established.

EXECUTION

During the execution phase, the signal officer performs the following activities:

- Manages and directs all aspects of the unit communications system
- Supervises the communication activities of subordinate and attached units
- Supervises the maintenance of signal equipment for the battalion and subordinate units
- Supervises communications among the battalion and higher, lower, and adjacent headquarters

Establishing an Effective Communications System: Key Factors

- Use proper authentication procedures in all operations
- Have SOI secured on a tie-down cord
- Use radios on lowest power
- Transmit for no more than 8-12 seconds
- Use directional antennas
- Use abbreviated radio procedure and send abbreviated reports
- Use the secure mode when possible
- Send timely, accurate reports, following the SALUTE format
- Keep radio volume low and use hand mikes while listening
- Use brevity codes and OPSKEDs where possible
- Rehearse procedures/systems
- Develop contingency plans for communications

CONCLUSION

The importance of communications for effective command and control can not be overemphasized. If the commander is planning for a communications system, he should be guided by the types and amount of equipment that are available. All C-E assets available throughout the command must be considered. This includes equipment in the signal unit as well as the C-E equipment and personnel assigned to the battalion.

To ensure the capabilities of the signal officer are fully utilized, the following information checklists are provided.

What the signal officer needs to know from the battalion commander:

- Mission
- Concept of operation
- Commander's intent
- The enemy situation
- Any special fires (prep, FPF, illum)
- Maneuver control measures
- Time available
- Chain of command
- How the commander can be located
- Rehearsal time and location
- Communication/equipment requirements

What the battalion commander needs to know from the signal officer:

- Communication equipment status
- Communication resources available
- Communication support available (mobile subscriber equipment coverage)
- Special/additional training requirements
- Modifications in SOIs
- Frequency changes/alternate means of communications
- Anti-jamming plan

REFERENCES

Field Manuals

- FM 7-20. The Infantry Battalion. 6 April 1992.
- FM 11-30. MSE Communications in the Corps/Division.
27 February 1991.
- FM 11-32. Combat Net Radio Operations. 15 October 1990.
- FM 11-41. Signal Support Echelons Corps and Below (ECB).
18 December 1991.
- FM 11-50. Combat Communications Within the Division
(Heavy and Light). 4 April 1991.
- FM 24-1. Signal Support in the Airland Battle. 15 October 1990.
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- FM 24-18. Tactical Single-Channel Radio Communications Techniques.
30 September 1987.

CHEMICAL

INTRODUCTION

The task force NBC staff consisting of the chemical officer and the chemical NCO, is primarily responsible for integrating NBC defense, contamination avoidance, and smoke operations to support task force level operations. In an NBC environment, the battalion must be ready to implement contamination avoidance and protective measures to enhance its survivability and provide timely information to higher headquarters about possible contamination threats to other units. The chemical officer, assisted by the chemical NCO, plays an important role in enhancing the battalion's survivability by training and supervising the battalion decontamination team. This training is critical since time and resource constraints require that the battalion conduct its own (limited, hasty) decontamination operations. The unit may be forced to fight dirty with occasional MOPP exchange. Deliberate decontamination operations will occur, most likely, when units are being reconstituted.

The commander must ensure that decontamination operations are planned to support contaminated maneuver forces. In the defense, this support is planned from the FLOT to the battalion rear boundary. In the offense, decontamination support is planned from the battalion rear boundary through the objective.

Monitoring for NBC hazards is the responsibility of the entire unit. The commander must also ensure that the appropriate personnel are trained to operate chemical detection, decontamination, identification, and radiac equipment; and conduct surveys as required from higher headquarters.

ASSETS

The combat assets under the direction of the chemical officer and NCO are battalion internal. The chemical officer is assigned to the S3 section in a combat battalion. However, in the case of airborne or air assault battalions, a decontamination specialist is assigned to the HHC. A decontamination specialist is assigned to the armor and infantry battalion HHC and each line company has an assigned NBC NCO. Each battalion

is authorized organic decontamination equipment either one M12A1 PDDA or two M17 Sanators.

Battalion level internal assets consist of one chemical sergeant. His functions are to advise the commander and to "train the trainers" who train the assigned operators of nuclear and chemical monitors and detectors.

NBC defense teams (i.e., company level detection and radiological survey and monitoring teams and a battalion decontamination team) are not required by any current doctrine. These requirements are normally found in the unit SOP.

PRIMARY CHEMICAL OFFICER DUTIES

The chemical officer exercises staff supervision over NBC training and equipment maintenance within the battalion and exercises technical supervision over all NBC activities. The task force NBC staff focuses planning to support the mission by addressing, in detail, decontamination, smoke, and NBC reconnaissance operations.

The chemical officer, together with the S2, includes NBC in the IPB process. The chemical officer develops templates to estimate enemy use of chemical agents and enemy smoke operations for each enemy COA developed by the S2. In developing his estimate, the chemical officer must also consider the enemy's tendency to employ these assets to:

- Block positions
- Deny terrain
- Block cross mobility corridors
- Canalize forces
- Reinforce obstacles
- Disrupt command and control
- Slow reinforcements
- Block the flow of supplies
- Contaminate reserves
- Cause casualties
- Break the friendly defense

When evaluating the probability of future chemical strikes by the enemy, the chemical officer must consider the following:

- Chemical munitions sighted in enemy's corps or division area
- Chemical bombs or spray tanks uploaded on enemy aircraft
- MOPP status of enemy troops
- Reports of chemical strikes
- Repositioning of known enemy chemical units, especially decontamination units
- Communications intercepts unique to special weapons' firing batteries

The chemical officer provides recommendations on the use of friendly smoke operations so the staff can effectively integrate all available smoke assets and develop a detailed smoke plan IAW the commander's intent and/or to support the mission. To effectively use smoke as an obscurant the following factors must be considered:

- The electro-optical capabilities of the enemy
- The extent to which electro-optical devices are employed, and whether they are being employed on reconnaissance systems, direct-fire systems, or all systems for both the enemy and friendly forces
- The smoke delivery capabilities for both the enemy and friendly forces
- The extent of enemy smoke employment
- The directed-energy weapons (DEW) capabilities for both the enemy and friendly forces
- Types of smoke missions
- Available assets
- Smoke target criteria
- Weather data from the S2

The chemical officer also provides expertise in the tactical employment of flame weapons. The application of flame weapons at decisive times and places on the battlefield reinforces fighting positions,

achieves surprise, and produces casualties and psychological shock. Flame weapons provide the tactical commander a resource to:

- Repel enemy penetrations
- Destroy enemy forces
- Gain time
- Provide obstacles
- Isolate or canalize an enemy
- Slow enemy movement
- Surprise enemy forces
- Degrade enemy morale

STAFF COORDINATION

The chemical officer works closely with the S2, S3, S4, and the brigade chemical officer. Coordination efforts focus primarily on issues related to the operational effectiveness of friendly NBC employment and the dangers associated with anticipated enemy use of NBC. The chemical officer must work within the intelligence network. He is required to provide input to the S2 regarding his analysis of enemy intelligence gathered on NBC activities. He coordinates with the S4 ensuring chemical defense equipment is prepositioned forward as indicators for the use of chemical weapons begins to materialize. Coordination with CSS staff is required for both decontamination (water, decontaminants, augmentees, transportation, medical support, routes, etc.) and smoke operations.

It is critical that the chemical officer fully understand the commander's intent and the complete scheme of maneuver/concept of operations. He receives specific guidance from the S3.

PLANNING

The major responsibilities of the chemical officer during the planning process include:

- Integrating NBC threat analysis into the IPB process and NBC recon into the R & S plan
- Performing vulnerability assessments given the commander's acceptable loss criteria
- Completing MOPP analysis and recommending MOPP status
- Determining automatic masking criteria
- Predicting fallout and downwind vapor hazards and their effects on operations
- Preparing the smoke and NBC annex to plans and orders, NBC estimates, and SOPs
- Maintaining supply status and allocations of NBC defense stocks

The chemical officer also advises the commander in the following areas:

- The use of smoke to support the tactical scheme of maneuver
- Impact of the enemy's use of NBC weapons on the civilian population
- Impact of NBC contamination on tactical, logistical and civil-military operations
- Use of riot control agents and herbicides in support of tactical operations and the need to get release authority
- Use of flame weapons and flame field expedients
- The resupply of fog oil, diesel, mogas, two-cycle fuels, and water to supporting chemical units
- The resupply of chemical defense equipment in anticipation of enemy use of chemical weapons

PREPARATION

During this phase, the chemical officer continues to monitor the enemy situation and the unit's preparation. He and his staff inspect the unit to ensure the equipment is ready and that the assigned operators are prepared to perform their respective additional duties as the tactical situation requires. Key responsibilities during the preparation phase include:

- Checking NBC preparedness/readiness issues
- Ensuring the organic decontamination equipment is operational and the PDDA operator is familiar/knowledgeable of planned decontamination operations
- Managing CDE
- Ensuring the effective link-up of attached NBC assets if not already completed

EXECUTION

The primary responsibilities of the chemical officer during the execution of the operation include:

- Maintaining the NBC situation map
- Providing recommendations concerning MOPP levels consistent with the enemy threat and the tactical situation
- Recommending operational exposure guidance (OEG)
[The OEG is normally mandated by higher headquarters]
- Collating, evaluating, and distributing NBC contamination data
- Providing recommendations concerning the employment of supporting NBC reconnaissance and smoke units
- Disseminating the NBC 3 chemical message
- Supervising the activities of chemical detection and radiological survey and monitoring teams
- Coordinating and supervising decontamination missions conducted with or without supporting divisional assets

In addition, the chemical officer advises the commander in the following areas:

- Clearing of obstacles and hazards created by enemy nuclear and chemical weapons (coordinated with the engineer)
- Acquisition, storage, issue, and movement of chemical equipment and supplies, to include MOPP materiel resupply rates and distribution schedules

CONCLUSION

The chemical officer provides valuable expertise in the employment of nuclear, biological, and chemical weapons on the integrated battlefield. To ensure that the chemical officer and his assets are fully utilized, the following information checklists are provided.

What the chemical officer needs to know from the battalion commander:

- Mission
- Concept of operation
- Commander's intent
 - Intent for fighting contaminated
 - (Commander's) acceptable loss criteria
 - Decontamination priorities/concerns
 - Employment considerations for NBC reconnaissance
- The enemy situation
- The friendly situation
- Priority of fires
- Any special fires (prep. FPF, illum)
- Fire coordination signals
- Any special munitions (FASCAM, smoke)
- Maneuver control measures
- Time available
- Obstacle plan
- Chain of command
- How the commander can be located
- Rehearsal time and location
- Axis of advance
- Enemy avenue(s) of approach

What the battalion commander needs to know from the chemical officer:

1. Does he understand above elements?
2. The following chemical specific items:

- NBC nuclear weapons status
- Impact of friendly use of NBC

The chemical officer's:

- Assessment of the enemy's use of chemical weapons
- Assessment of the enemy's use of nuclear weapons
- Criteria for these assessments
- Evaluation of the battalion monitoring teams' readiness
- Assessment of potential downwind vapor hazards
- Recommendations on employment/missions of attached NBC assets
- Decontamination (to include priorities) and smoke operation plans
- Templated chemical strikes
- Identification of NBC reconnaissance mission(s)
- Assessment of the use/impact of enemy smoke operations

REFERENCES

Field Manuals

- FM 3-3. Chemical and Biological Contamination Avoidance. 16 November 1992.
- FM 3-4. NBC Protection. 21 October 1985.
- FM 3-5. NBC Decontamination. 24 June 1985.
- FM 3-7. NBC Handbook. 7 June 1990.
- FM 3-50. Smoke Operations. 4 December 1990.
- FM 3-100. NBC Defense, Chemical Warfare, Smoke, and Flame Operations. 23 May 1991.
- FM 7-20. The Infantry Battalion. 6 April 1992.

CHAPLAIN

INTRODUCTION

The chaplain is the battalion commander's special staff officer for matters concerning religion, morals, ethics, and morale as affected by religion.

ASSETS

Unit ministry team (UMT). The UMT consists of the chaplain and the chaplain assistant. Together they move throughout the battalion area of operations providing religious support to the commander, his subordinate commanders, his staff, and the NCOs and soldiers of the battalion. The chaplain assistant is a critical member of the team. While he does provide security and drives, at times, for the non-combatant chaplain, he has many other very important tasks in religious support operations.

Command sergeant major. As the senior NCO and the adviser to the commander on enlisted affairs, the CSM is privy to vital information concerning the soldiers. Working with the CSM, the chaplain can help solve many problems for soldiers long before they get into "official" channels.

First sergeants. First sergeants can provide valuable assistance to the chaplain in the early identification and diagnosis of soldier problems. On the battlefield, 1SGs can also play an important role in controlling combat stress while working with the chaplain during his visits with soldiers in tactical assembly areas (TAAs) and on the line.

Medical platoon. During an engagement, the chaplain will work very closely with the medical platoon to ensure religious support for casualties and the medical personnel that are treating them.

PRIMARY CHAPLAIN DUTIES

- Prepares the religious support estimate
- Prepares the religious support plan
- Submits the religious support plan in annex format for inclusion in the battalion OPORD, when appropriate

- Conducts religious support (RS) operations (or coordinates for them in cases where the chaplain is unable to do so because of denominational conflicts)
 - Establishes communication and coordination of religious support with higher UMTs and with UMTs on their flanks
 - Conducts appropriate religious services, rites, ordinances, sacraments, and ministrations
 - Gives pastoral care to soldiers, particularly those who have become casualties
 - Ensures that soldiers from other units operating in the battalion AO receive religious support
 - Ensures soldiers with special religious needs are accommodated
 - Performs appropriate memorial/funeral services and patriotic ceremonies

- Advises the commander of matters concerning religion, morals, ethics, and morale as affected by religion
- Advises the commander and staff on the influence of indigenous religious groups and customs on the commander's courses of action
- Works with the S1 and the battalion surgeon in the battalion mental health program to include training unit leaders in the preventive aspects of stress on soldiers

Unit Responsibilities

Family care. The chaplain takes an active role in the support of family members. Prior to deployment, the chaplain encourages and advises family support groups; familiarizes himself with US Government and local policies governing marriages overseas; assists the S1 in working family care issues; and assists soldier families in making contact with local support agencies such as the Red Cross, Army Community Services, and Army Emergency Relief.

STAFF COORDINATION

The chaplain coordinates with various staff members/individuals in the areas listed below:

With the XO:

- Religious support plan
- Staff meetings
- Daily activities

With subordinate unit COs/1SGs:

- Worship services
- Times and locations for visiting soldiers
- Special spiritual needs of their soldiers
- Other special needs
- Integration of replacements

With higher unit ministry teams:

- Religious support plan
- Battle stations
- Additional religious support
- Availability of plans
- Resupply of ecclesiastical supplies
- Replacements

With the S1 for:

- Personnel estimate
- Update on casualty data
- Letters of condolence
- Update on replacement data
- Movement plan with updates
- Requests for additional RS
- Religious support annex for OPLAN/OPORD

With the S2 for:

- Update on enemy situation
 - Locations
 - Probable courses of action
 - Activity which impacts on RS activities
- Update on weather
- Terrain/trafficability data
- Additional maps of AO
- Indigenous religious groups and sites for IPB
- EPW

With the S3 for :

- Course of action (from S3 plans)
- Update on unit locations (current/planned)
- Combat power with changes
- Update on operation
- Task organization

With the S4 for:

- CSS plans (with graphics)
 - Main/alternate/"dirty" chemical supply routes
- Health Service Support plans (with graphics)
 - Ambulance exchange points (active/planned)
 - Mass casualty plans/criteria
 - Aid station location/forward treatment team

PLANNING

The planning focus of the chaplain centers around religious support to soldiers forward before engagements, in TAAs during preparation time, and at aid stations during engagements. After the engagement, the chaplain provides religious support to soldiers forward in addition to providing memorial services and ceremonies. These planning activities are discussed briefly below.

Tactical assembly areas. While soldiers are preparing for combat, they will be anxious about what the future holds. Religious services, rites, and sacraments, consistent with the chaplain's particular faith group affiliation may not be sufficient. Therefore, the chaplain plans for additional denominational support, contacts the brigade chaplain to coordinate that support, and coordinates with the units for time and place for all religious support. Additionally, the chaplain will plan to visit with soldiers, providing pastoral care, counsel and assurance where necessary.

Battalion aid station. Based on casualty projections, the chaplain plans to locate where the preponderance of casualties are expected. This is particularly important if the medical platoon leader decides to split the aid station into two treatment teams. In a low intensity conflict environment, it may be necessary for the UMT to travel between several locations to give religious support to casualties.

Memorial services. Critical to the morale of the surviving soldiers is the appropriate honoring of their comrades who have fallen in battle. The chaplain plans ahead for this eventuality.

PREPARATION

The chaplain prepares the religious support plan and coordinates it as quickly as possible because while the rest of the unit is preparing for combat, he needs to begin providing religious support. During the planning phase, the chaplain assistant makes sure the team and its equipment is ready to go. It may be necessary to arrange for transportation and to coordinate with the ISGs for religious support in the TAA.

EXECUTION

As noted earlier, the chaplain begins providing religious support prior to the rest of the unit beginning its operations. Priority is given to those going into combat first. The amount of time available dictates how much time the chaplain spends with each element of the unit. Every effort is made to reach as many soldiers as possible.

CONCLUSION

The chaplain provides the commander, the staff, and the soldiers with religious support and pastoral care. To ensure the chaplain is appropriately employed, the following information checklists are provided.

What the chaplain needs to know from the battalion commander:

- Mission
- Commander's concept of the operation
- Commander's intent
- The enemy situation
- Time available
- Chain of command
- Task organization
- How the commander can be located
- Rehearsal time and location
- Transportation and communication support

What the battalion commander needs to know from the chaplain:

- Religious support plan
- Issues dealing with ethics, morals, and morale as affected by religion
- Impact of local religious groups and sites on planned military operations
- Any special religious accommodation requests from soldiers
- Any humanitarian issues arising from indigenous groups
- Location of the UMT
- Communication link to battalion UMT
- How additional religious support assets can be obtained if needed

REFERENCES

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